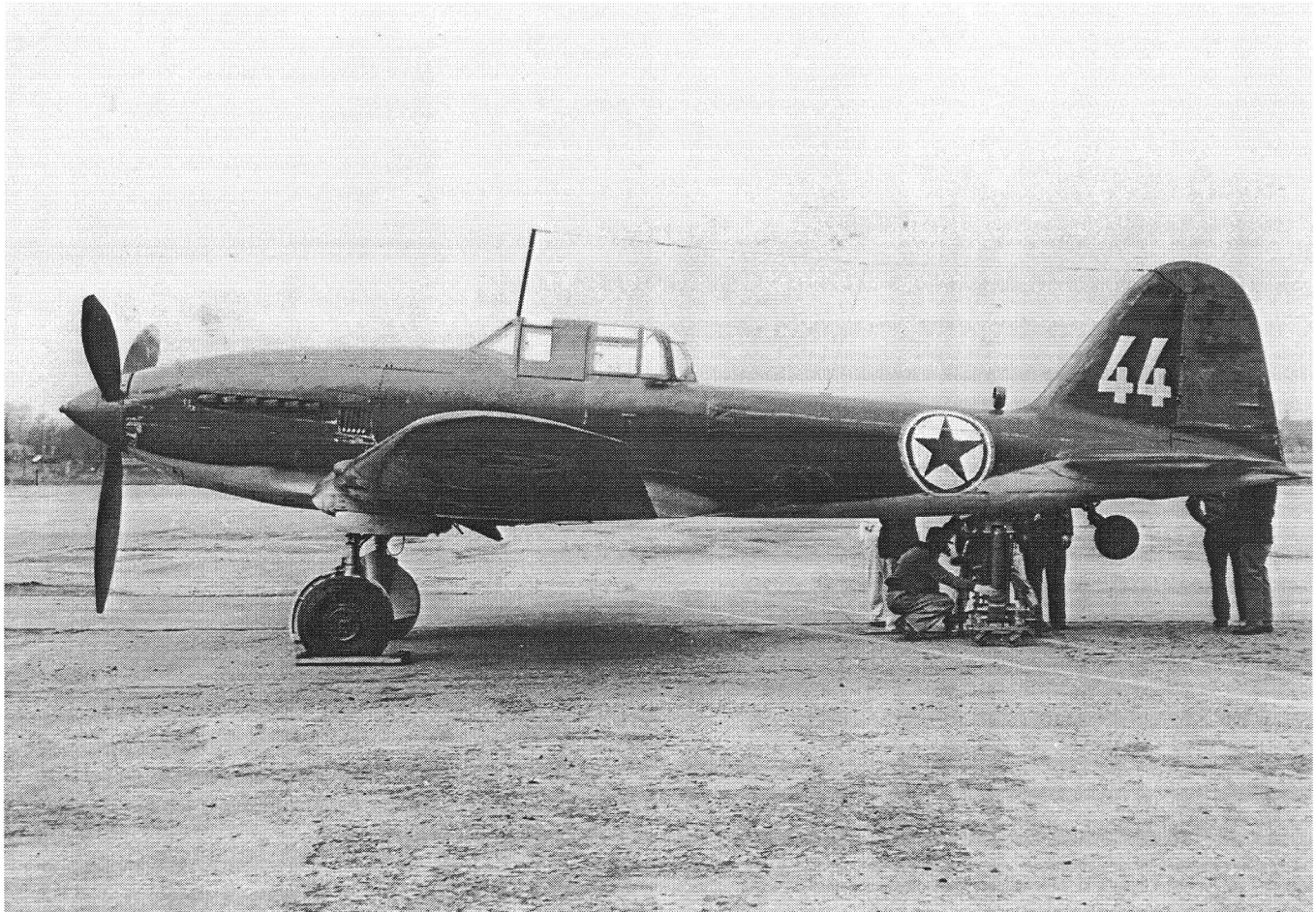


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July 2011

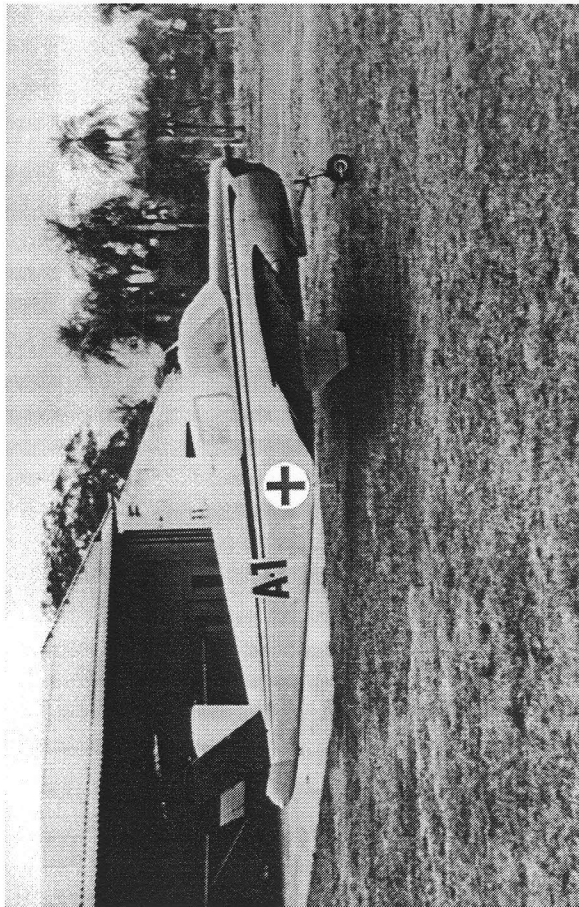
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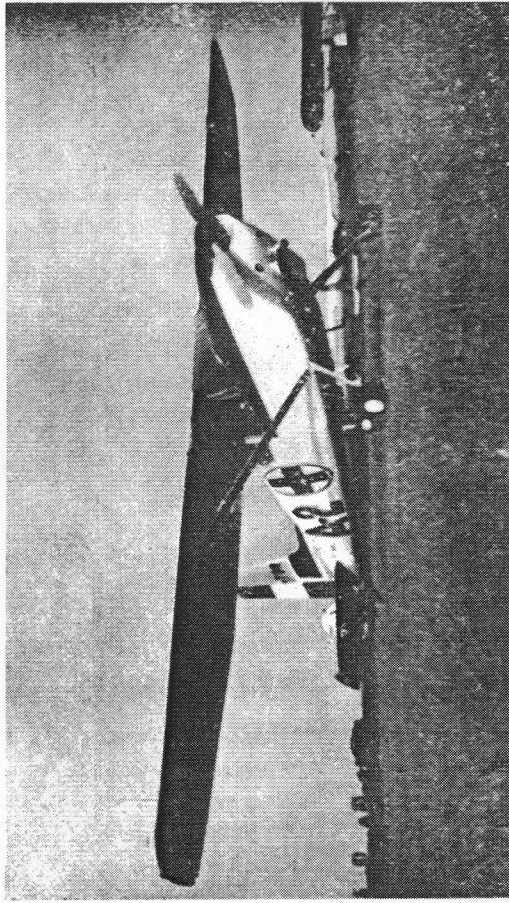
North Korean Air Force at War: Part 1
A Fokker Representative in Bolivia
Paraguayan Air Ambulances
Katanga Douglas C-47
Ecuadorian Mil Mi-17
Bolivian Fokker C.V
Lapland War

vol. 35 no. 1 (137)

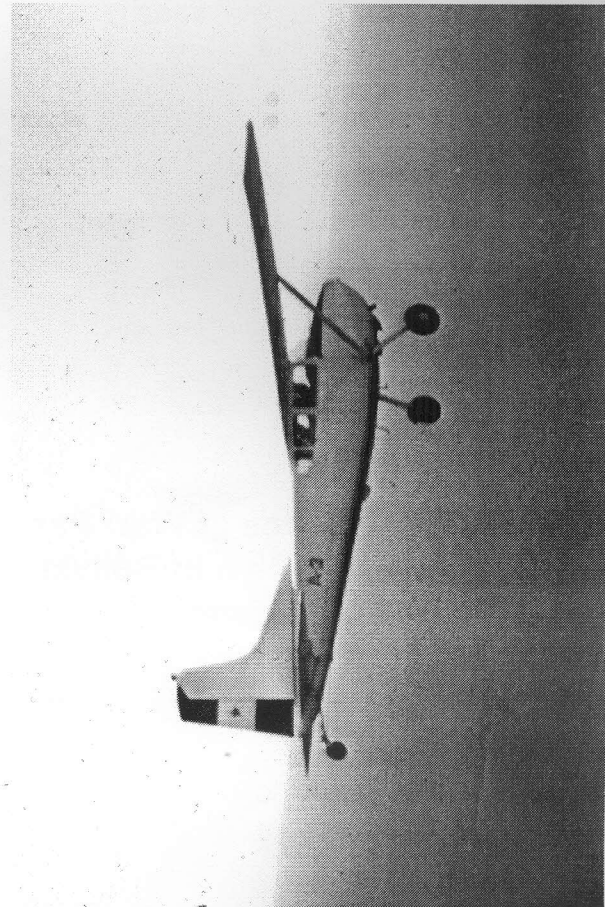
July 2011



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SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearing House

E-Mail: safo@redshift.com

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COVER COMMENTS: One of two KPAF Il-10s (#44 and #55) captured when UN forces retook Kimpo AB, near Seoul, this example is being examined, and restored to airworthy status, at Cornell University Aeronautical Lab, Inc., (the former Curtiss-Wright Airplane Company's Research Laboratory) in Buffalo, NY, before being flight tested by the USAF at Wright-Patterson AFB, Ohio. (Aircraft #55 was cannibalized for spare parts.) From June through August, 1951, this aircraft was flown a total of 14 hours and 25 minutes before a landing gear collapse ended the evaluation program. (Robert F. Dorr Collection)

-letters-letters-letters-letters-letters-letters-letters-letters-letters-letters-

"I'm still looking information on Ruthenian guerrilla air activity. I've found much on their forces operating in the Carpathian Mountains. I've contacted the son of one of the original Bat Carpatho-Russians (in the early 1960's) who gave me original information and he returns to Ruthenia twice yearly. I've also become friends with two Ukrainians (Carpatho-Russians) students at the University of Bat who will assist my search at the University of Uzharod and Luiv. Lastly I've met a Slovak doctor from eastern Slovakia who has many relatives in the Uzuzhord region. I hope all this effort leads to success."
Douglas Breveglieri (SAFCH #324), USA.

"Back in 1940-41 my best friend's father worked at the Long Island City (Queens) Brewster plant. One day the company was celebrating a contract award, I think, and had both an F2A and SB2A on exhibit at LaGuardia Field next

to the PAA terminal building. It is a very faint memory today.

"I also saw an F2A fly over my house at maybe a thousand feet (I lived on the upper eastside). It headed north, went into a tight turn completely on it's side, and went back south. No mistaking what it was and it looked white in the sunlight.

"A couple of issues back you had an article on a replica Buffalo made for a Dutch museum. I was building three Buffalos when the issue came out. Two Matchbox kits (don't know why they left the bottom glass works out) and an Airfix baggie kit. The two greens camouflage of the Dutch plane seemed odd as I've been used to seeing Dutch Buffalos in dark earth/dark green as on the Brits. Anyhow, now one of my models is in two greens. Was this the original factory finish or something the Dutch applied in the East Indies?"

John Mozolak (SAFCH #1368), USA.

[The following information was sent in by Dan Ford (SAFO #1516).]

"Finnish television broadcast a documentary, *Brewster - Pearl of the Sky*, on March 16, 2011. This hour-long show tells the story of the last flight, recovery, and museum display of BW-372, the only surviving example of the roly-poly Brewster Buffalo fighter plane of World War Two.

"Marja Lampi writes: 'It was shown on our main channel YLE TV1 in prime time Wednesday March 16th. It is a 58 minute documentary. This trailer is for some reason not quite sharp. Also, the English is not perfect, but we will correct things later. I just wanted to show to all Buffalo buffs that this documentary is ready. It is a very professional work both artistic and technically. The facts are shocking, but correct. I think that not only the History Channel but also channels like CNN could show it in USA'. For further information, contact me (Marja) at cub06h@gmail.com."

AUSTRALIA

AUSTRALIAN PLASTIC MODELLERS ASSOCIATION

(APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$40. International payment is best handled via Paypal at iansharyn@bigpond.com.au. Web Site: www.apma.org.

3-10 (28 pages) "CIA Airlines: China Air Transport PBY-5A Catalina" one pages including a profile drawing. "Douglas A-24 in New Guinea" 3 pages including 7 photos and one profile drawing. "Camouflage and Markings of ML-KNIL Brewster 339C/D 1941-42" 5 pages including one photo and a color 3-view drawing. [Ed: A detailed and well written explanation by Buffalo expert Jim Maas of the serial system and the controversy concerning the colors Oudblad (Old Leaf) and Jongblad (New Leaf).] And, lots of articles on armor vehicles.

4-10 (28 pages) "Douglas A-24 Banshee in Australia" ½ page with 3 photos. "Lockheed Hudson Variants" 5 pages with 6 side-view drawings, 2 photos (one in color of a Hudson preserved in Australia), and a table listing the differences among variants. "DC-6 in Australia" 2 pages with 6 photos. And, lots of articles on armor vehicles.

AUSTRIA

ÖFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Pfenninggeldf 18/2/14, A-1160 Wien. Write for free sample.)

1/11 (40 pages) "Oeffag Albatros D.III in polnischen Diensten" 4 pages including 10 photos and a side-view drawing of D.III in Polish service. "Red Fox 26" 3 pages including 10 photos of repainting Saab 105OE 'FR-26' to commemorate the 40th anniversary of service in Austria.. "30 Jahre AB 212" 4 pages including 3 color photos and 2 color profile drawings of '5D○HZ' in special colors to commemorate 30 years of Austrian service.

BELGIUM

KIT (IPMS Belgium, c/o Michel Willot, dreve de Champagne 14, B-1190 Bruxelles; French & Flemish. International Postal Money Order for \$30 for 4 issues.

#160 4/2010 (56 pages) "Dewoitine D.371" 5 pages on building the 1/72-

scale Azure kit including 10 photos of the model. "AMD/Dornier Alpha Jet" 17 pages including 19 color photos of Belgium Alpha Jets and 21 photos of constructing the 1/48-scale Heller kit. "Heinkel Me 162 A2 'Salamander': Part 1" 5 pages on building the 1/48-scale Tamiya kit including 10 photos of a museum aircraft.

#161 1/2011 (52 pages) "Heinkel He 162 (Part2)" 8 pages on building the 1/48-scale Tamiya kit including 17 photos. "Heinkel 162 Walk Around" 11 pages with 47 b&w and 17 color photos. "Fokker E.V" 6 pages on building the 1/48-scale Eduard kit including 16 photos.

FINLAND

FINNISH AIR FORCE SIG, c/o Nils R. Treichel, Gustav-Adolf-Str.16, 27404 Zeven, Germany. Entirely in English. Available on the Internet from nrtreichel@vr-web.de.

No. 28 (8 pages) "Swedish Nieuport 29" 2 pages including 4 profile drawings and one plan-view drawing. "Finnish Me 109 Schemes" 2 pages including 8 profile drawings. "Finnish Piper Arrow IV" 2 pages on converting the Airfix Arrow III to a T-tail Arrow IV. The drawings will appear in the next issue.

FRANCE

AIR MAGAZINE, Artipresse, 119 rue Anatole France, 93170 Bagnolet, France. Six issues a year. 38 euros in France, 44 euros in Europe, and 55 euros for the rest of the world. E-mail: airmagazine@rocketmail.com.

#52 Mars/Avril 2011 (76 pages) "Le Heinkel He 112 en Espagne" 20 pages including 45 photos, two 4-view color drawings, 13 color profile drawings, and a painting of a Spanish He 112 shooting down a USAAF P-38 Lightning. "L'Arsenal O-101" 6 pages including 13 photos, one 3-view 1/72-scale drawing, and one color profile drawing. "Les îles flottantes d'Edward Armstrong" 5 pages including 9 photos and drawings of a proposed floating airfield in the mid-Atlantic Ocean. "Les Douglas F4D Skyray et F5D Skylancer" 14 pages including 5 photos, a 1/72-scale 5-view drawings (F4D), a 2-page cut-a-way drawing (F4D), 2 pages of tables, two 2-view color drawings (F4D), 10 color

profile drawings (5 F5D & 5 F5D). "1912 Le prix de l'aéro-cible Michelin" 5 pages including 14 photos. "La production des Bloch MB 175" 11 pages including 33 photos. "Infomaquette et livres" 2 pages including reviews of 3 books, one magazine, and 8 kits.

AVIONS: Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 50 euro for 6 issues). Website: www.avions-bateaux.com. E-mail: contact@avions-bateaux.com.

#180 (76 pages) "Le Macchi M.5 (partie 2)" 14 pages on Italian M.5's including 23 photos, 9 color profile drawings, color cover painting, and table of victories. "Les As Francais 1939-1945: Marcel Albert (partie 1)" 16 pages including 30 photos, 4 color profile drawings (Yak-1 & Yak-9), map showing his route from England to Russia via Africa and the Middle East. [Ed: Two of the photos are of D.520's carrying the Free French Cross of Lorraine insignia. This is the first time I remember see this insignia on a D.520.] "Dewoitine 342 (partie 2)" 7 pages including 13 photos and 2 color 3-view drawings of 'F-ARIZ' – one in camouflage and the other in Vichy colors. "Morane-Saulnier 406 sur Oran" 8 pages including 13 photos. "Les Caproni Ca.111 du Cuerpo Aeronautico Peruano (partie 1)" 8 pages including 19 photos. "De la Campagne de France a la Guerre d'Algerie (partie 1)" 8 pages on French activities in Algeria after the Armistice including 35 photos of assorted aircraft.

#181 (76 pages) "Amelia Earhart: partie 1" 8 pages including 32 photos. "Le Farman 190: Explorateur des Colonies: partie 1)" 24 pages including 47 photos, 2 maps, and 12 color profile drawings. "Les As Francais 1939-1945: Marcel Albert (partie 3)" 10 pages including 31 photos, and one color profile drawing (Yak-9T), "Les Caproni Ca.111 du Cuerpo Aeronautico Peruano (partie 2)" 5 pages including 11 photos and 5 color profile drawings. "Morane-Saulnier 406 sur Oran: partie 2)" 9 pages including 12 photos, one map, and one color profile drawing (MS-406). "De la Campagne de France a la Guerre d'Algerie: partie 2; La Campagne de Syrie)" 7 pages including 28 photos.

GERMANY

FLIEGER REVUE EXTRA (Verlag Fliegerrevue, Herrn Detlef Billig, Oranienamm 48, D-13469 Berlin. 4 issues per year, \$66 surface. Payment by check drawn on German bank)

#32 February 2011 (114 pages) "Nur 15 Minuten bis zum Atomschlag: Marschflugkörper in Deutschland" 36 pages on US and Soviet cruise missiles stationed in Germany including 57 photos, 7 maps (one of missile bases in Cuba), and 5 color profile drawings (US: TM-61C Matador, JT-33, & TM-76A Mace; Soviet: Meteor & S-5). "Flugeuge aus Down Under: Australiens Luftfahrtindustrie – Teil 2" 14 pages including 40 photos and 5 color profiles (Fletcher FU-24). "Forschen – Bauen – Fliegen: Die deutschen Akaflieger bis 1945 – Teil 2" 36 pages on German gliders including 66 photos and 4 color profile drawings (Hannover H 1 Vampyr, Beuth FAB 3, Chemnitz, Gottingen Flavag IV). "Luftkrieg im Paradies: die Philippinische Luftwaffe 1945 bis 2000 – Teil 2" 22 pages including 41 photos, two maps (air bases & contested islands in the South China Sea), 5 color profile drawings [T-28D (2), F-5A (2), & SIAI S.211), and one color 5-view drawing (Bo 105C).

IPMS Deutschland Journal. Website: ipmsdeutschland.de. Subscription: Europe 36 €; all others 40 €.

Jahrgang 43/2 (40 pages – all color) "Messerschmitt Bf 109 E-1" 2 pages on building the 1/32-scale Eduard kit including 5 photos of the model. "Chance-Vought F4U-5N Corsair" 4 pages on building the 1/48-scale Revell kit including 11 photos of the model. "Mitsubishi F1M2 Pete" 2 pages on building the 1/48-scale Hasegawa kit including 7 photos of the model. "Albatros Oeffag D.III Serie 253" 3 pages on building the 1/48-scale Eduard kit including 4 photos of the model. "Fieseler Fi 156 Storch" 6-page 'walk around' of the a/c in the Luftwaffenmuseum der Bundeswehr, Berlin, with 35 photos. "Northrop F-5A" 3-page 'walk around' of the a/c in the War Museum, Seoul/South Korea, with 14 photos.

ITALY

JP4 Menslie di Aeronautica e Spazio. Via XX Settembre, 60-50129 Firenze, Italy. Email: jp4@dueservice.com. Website: www.ediservice.it.

Marzo 2011 (100 pages) "Eurofighter: 100,000 Flight Hours" 5 pages including 10 photos (Italy, Austria, UK, & Spain). "Swiss Air Force: From Alouette to EC635" 6 pages including 7 photos. "Incidenti: Militari" one page including 4 photos (Thailand Bell 205, Sweden JAS 39, China J-8II Finback, Brazil HB-350 Esquilo).

Aprile 2011 (100 pages) Color photos: Kuwait C-130 'KAF324'; UAE AirTractor AT-802U; Saudi Arabia BAe Hawk; Malta Beech B200 King Air; & Morocco Hawker Beechcraft T-6C Texan. "Servicio Aereo de la Guardia Civil" 6 pages on Spanish helicopters including 6 photos (EC135, BK-117, & Bo.105). "Summit ... di aerie governativi" 2 pages with 8 photos (Kazakhstan Boeing 757 'UP-B701'; Panama Embraer Legacy 600 'HP-1A'; Ukraine Airbus A319 'UR-ABA'; Turkey Gulfstream GIV TC-ATA'; Azerbaijan Gulfstream 550 '4K-106'; Armenia Airbus A319 'EX-RA01'; Kuwait Gulfstream GV '9K-AJE'; & French Airbus A330-200). "Naval Aviation Centennial" 8 pages with 32 photos (including modern USN a/c in special colors, e.g. Goshawks and T-34s in 1930s scheme with yellow wings and tail planes in carrier colors, S-2B Viking in Battle of Midway colors, EA-6B Prowler and Beech TC-12B Heron in Battle of Coral Sea colors, & T-6B Texan in overall yellow. "Incidenti: Militari" one page including 5 photos (South Korea AW139, Dutch Lynx, & Myanmar An-148) and information on Libya losses (Su-22UM-3K on 23/2, Su-24MK on 5/3, & Mi-24 on 6/3).

Maggio 2011 (100 pages) Color photos: Chile C-295 ASW 'VP-1'. "La non-guerra di Libia" 6 pages chronicling the first 21 days of NATO's air war over Libya including 16 photos. "Incidenti: Militari" one page including 4 photos (Nigerian F-7, Swiss Super Puma, & Russian Su-27; and information on Libyan losses (MiG-21UM on 17/3, MiG-23 on 19/3, Soko Galeb on 24/3, and Soko Galeb & 2 Mi-35 on 29/3)

Giugno 2011 (100 pages) Color photos: AgustaWestland AW109 Burkina Faso 'XT-L-TI', RAAF NH90 '008', Brazil Skyhawk AF-1, Peru Mi-35P, Singapore Fokker 50MP, Sweden NH90, Swiss F-5, Tunisia Reims F406, & South Korea KAI FA-50. "Libia: la guerra sol arizzata" 6 pages on the air war over Libya from 8 April to 6 May including 17 photos of NATO a/c. "Gli NH90 finlandesi" 6 pages including 6 photos (NH90, Mi-8, & H500). "Cresce la Forza Aerea di Malta" 2 pages including 5 photos [Beech 200, Islander (2), Bulldog, & Alouette III]. "Incidenti: Militari" 1½ pages including 5 photos (Sudan Mi-24P & Mi-17, Turkey F-4E, Philippine Siai Marchetti AS-211, & India HAL HJT-36)) and information on "Libica Libera" Mi-35 lost on 9/4.

USA

SKYWAYS: The Journal of the Airplane 1920-1940 (PO Box 730, Red Hook, NY 12571. Website: ww1aeroinc.org. E-mail: subscriptions@worldwar1aeroinc.org. E-mail: ww1aero@gmail.com

#93 October, 2010 (96 pages) "DH 60 Gipsy Moth" 5 pages including 14 photos on restoration of NC919DH. "Prologue to the book *The Saga of Aeropostale* 5 pages on a 1930s air mail flight over the Andes and 8 photos of a reproduction Potez 25. "Potez RVIII" 7 pages on an early sporting plane including 7 photos and two 3-view drawings. "Hydrogliders" 4 pages on early French propeller-driven watercraft including 15 photos. "Ross RS-1" 4 pages on 1930s sports plane including 10 photos. "Clarence Chamberlin – The Film" 4 pages including 7 photos. "Maddux Airlines" 4 pages including 1 photo. "Texas Air Museum" 3 pages including 10 photos with 6 of the Eichmann Aerobat, "nearly all wing with a reverse delta planform". "Roy Ahearn – Aerial Adverting" 5 pages including 15 photos. "Scrapbook" 5 pages including 18 photos. "Fairhaven Airport/Baylies Field 1930" 2 pages including 6 photos. "ID UNK" 2 pages with 4 photos. "Ryan NYP at the NASM" 4 pages including 13 photos. "Reproductions & Restorations" 2 pages including 12 photos. "Models" 3 pages including 10 photos. "Reviews" 2 pages with reviews of 3 books.

The Korean People's Air Force in the Fatherland Liberation War

Part One

Douglas C. Dildy

[Authors Note: North Korea remains, even after some 65 years, the single most culturally closed, socially isolated, and information-denying nation in the world. Therefore, very little is known about the Korean People's Air Force Air Corps (KPAFAC) and its participation in the invasion of South Korea and the resulting "Korean Conflict" (Note 1). However, with the availability of former Soviet records (Note 2), and the more recent research permitted in Chinese archives, what is now known from the Communist allies' perspective begins to tell us this otherwise missing story in military aviation history.]

How to Build an Air Force

First You Get Some Airplanes...

To build a modern, effective air force is a daunting undertaking – and was so even in the middle of the 20th Century when WW2-surplus warplanes abounded all around the globe. After "the Great Leader" Kim Il-Sung (Note 3) established the Democratic People's Republic of Korea (DPRK) on 9 September 1948, that is exactly what its Communist government attempted to do. Established on 20 August the year before when Kim reorganized his personal Communist paramilitary force (called the "Constabulary Discipline Corps") into the "People's Army Group", the Korean People's Air Force (KPAF), commanded by General (Gen.) Van Len, consisted of an aviation (or "flying") corps (Note 4) and an anti-aircraft artillery corps. The former, under Major General (Maj. Gen.) Wang Yong, was intended to consist of one "aviation division" comprised of three to five "aviation regiments", each with three squadrons and a statutory strength of 44 aircraft.

Maj. Gen. Wang was a Soviet-trained bomber crewman who was ably assisted by Maj. Gen. Lee Whal as his vice-commander. Lee was a six-foot tall, imposing figure; a "dashing" 35 year old pilot sporting a handlebar mustache. One of the few experienced pilots in Korea, and one of a very few with any college education whatsoever, early in 1946 Lee volunteered his services to the Korean Communist leadership in Pyongyang to help establish an air force and train its first pilots. Coming from a wealthy family, he generously donated classrooms, dormitories and a dining hall (well before they would have been

confiscated by the Communists) to provide the nascent air arm with training facilities. Despite the fact that he had flown for the Imperial Japanese Army Air Force (IJAAF) during WWII, his generosity proved his patriotism and he was readily accepted by the North Korean leadership, and its army.

Maj. Gen. Lee knew that a modern, effective air force is based on aircraft, trained personnel, and adequate air bases, as well as a myriad of ancillary enabling and mission-enhancing components. For the North Koreans, getting aircraft was the easiest of these three. While USAF Intelligence of the day reported a polyglot assortment of war-surplus Soviet aircraft (including Lend-Lease Bell P-39/63s!) in the KPAF inventory, they were wrong. Actually only two combat types were initially included in the KPAF inventory: the Yakovlev Yak-9 fighter and Ilyushin Il-10 "assault" (or ground attack) aircraft.

Initially the USSR supplied the KPAF's fighter force with 79 Yakovlev Yak-9P propeller-driven fighters. (Notes 5 and 6) These equipped two fighter regiments – the more famous being the 56th Fighter Aviation Regiment (FAR).

More numerous were the Ilyushin Il-10 "Shturmoviki" ground attack aircraft. (Note 7) Some 93 were supplied by the Soviet Union, initially from WW2 surplus stocks, the Shturmoviki equipped two "assault aviation regiments" – the more active being the 57th Assault Aviation Regiment (AAR).

The last regiment comprising the 1st Aviation Division was the 1st Training Aviation Regiment equipped with 67 trainers, transports, and liaison aircraft. Initially the trainers were eight pre-WW2 Polikarpov Po-2 biplanes and a few Yakovlev UT-2 monoplanes (Note 8). Included with the influx of Soviet warplanes were an estimated two score post-war Yak-18 primary trainers and the far more powerful Yak-11 (the USSR's equivalent of the North American Aviation [NAA] T-6 Texan) advanced trainers. The transports were a handful of Douglas C-47s and their Lisunov Li-2 clones, supplemented by at least one former IJAAF Tachikawa Ki-54c (Army Type 1 Model C) "Hickory" twin-engine, eight-passenger light transport for liaison duties (Note 9).

...Then Train Some People to Fly Them

By mid-1950, USAF Intelligence assessed KPAF strength at three combat aviation regiments – totaling 132 warplanes and approximately 30 trainers and transports. However this was a misleading estimate of the KPAF's real strength because it did not take into consideration of the lack of the second and most important component of an effective air force: trained personnel. According to Soviet sources, by May 1950 the KPAF had 120 qualified pilots with another 151 undergoing training. However, only 32 were rated as "combat ready". These were enough to man only one Yak-9P (10 pilots) and two Il-10 squadrons (22 pilots and 17 "aviation technicians").

This sorry state of affairs was because Maj. Gen. Lee Whal's training program had an immense challenge to overcome. He began in mid-1946 by organizing flying clubs at Pyongyang and four other airfields (Note 10) where Soviet occupation units were still stationed. The Russians became the instructors at these locations, teaching North Koreans to fly Po-2s and UT-2s, with the first of 22 Yak-18s being received shortly thereafter.

The main problem was the lack of suitable pilot candidates. Until the Soviets' "liberation" of what became North Korea, the only North Korean pilots in the country were those who had served in the IJAAF and, other than Lee himself, these were considered "enemies of the people" and were "not asked" to join the fledgling air arm. Additionally, most literate members of Korean society had fled south into the "US Korean Zone of Occupation" to escape persecution and "rehabilitation" under "the true light of Korean Socialism", leaving behind an almost entirely illiterate peasant population. Called "rice paddy workhorses" by the Russians, the Korean peasants were turned into infantrymen fairly readily, but teaching them to fly a modern, complex aircraft was an entirely different matter.

Consequently "specialist recruiters" from the Soviet Army (primarily those of Chinese, Korean, and Mongolian extraction) canvassed the "Russian Korean Zone of Occupation" to select and solicit young literate Koreans for induction into the flying clubs and their successors, the military aviation schools. The "First Swallows" began graduating at the end of 1947 and obtained early operational experience flying C-47/Li-2s from Pyongyang to the Soviet Primorye area (Vladivostok and Khabarovsk) and China (Harbing) as copilots to Russians delivering diplomatic mail and ferrying Communist personnel between the Occupation Zone and the two "brother partner" nations.

A year later when combat aircraft began to arrive, the most politically reliable, experienced, and skilled aviators began advanced training, under Soviet tutelage, of course, on the Yak-11 then the Yak-9 and Il-10. Russian teaching techniques were very structured and methodical ("more suitable to Communist peasant soldiers") and progress was commensurately "slow but thorough", impeded not the least by the language barrier and the Koreans' lack of education (thus neutralizing most attempts at teaching any theoretical "fundamentals of flight", meteorological and other scientific academic courses). Consequently by mid-1950 only a few graduates had attained the proficiency necessary to fly advanced high-performance aircraft in combat.

...And Build Some Places to Base Them

The third component for a viable modern air force is the establishment of air bases with landing strips, hangars, and all the facilities to operate and maintain sophisticated combat aircraft. In addition to the existing main base at Heijo and the smaller Onjong-ni airfield near Pyongyang, the KPAF began building military air bases, or renovating those vacated by the Japanese, at Wonsan (a former IJAAF depot) and Yonpo (just south of Hungnam) on Korea's east coast, as well as four advanced strips (Note 11) near the 38th Parallel, the most significant being at Sinmak and Pyonggang.

Kim Il-Sung's Plan for Invading South Korea

The KPA's invasion plan included two main axis of attack. Three divisions (1st, 3rd, and 4th), each spearheaded by a battalion of Soviet-supplied T-34-85 tanks from the 105th Tank Brigade, would attack frontally towards the ROK capital of Seoul while a fourth (6th) drove southwest to capture Kimpo AB and the port of Inchon. Meanwhile two infantry divisions (2nd and 12th) and a motorcycle regiment (603rd) would attack through the central mountain range in the hope of being able to descend from the highlands behind the ROKA forces defending Seoul, thus cutting off their retreat. Additionally reinforced "border brigades" would provide flank coverage by advancing down each coast.

The KPAF had three squadrons of combat aircraft to support the invasion. (See Appendix One for the KPAF's Order of Battle for June 1950) One Il-10 unit deployed to Yonpo to provide air support for the forces pushing through the central highlands because the mountainous terrain precluded conventional artillery operations. The second Il-10 squadron and the Yak-9Ps would support the main advance towards Seoul.

Comparing Korean Air Forces

Even though the KPAF was not the awesome air force that USAF Intel suspected, it was far more powerful than its adversary. At the time of the invasion by North Korea, the Republic of Korea's (ROK) air arm consisted of one training unit with eight Piper L-4 Grasshoppers (the ubiquitous "Piper Cub") (Note 12) and three NAA T-6D Texans. The service had 39 qualified pilots with another 18 in training. The former were either instructors or members of a liaison unit flying five Stinson L-5 Sentinel light planes. Both units were based at the Youi-do airfield (also referred to as "Seoul International Airport"), but frequently flew to the USAF's Kimpo Air Base (AB; now called the Gimpo International Airport), also near the ROK capital, and periodically to five other airfields (all "under construction" at this time) where military detachments were assigned. (Note 13)

What the "Great Leader of the Korean People" failed to reckon on was the USAF's Far East Air Forces

(FEAF) with the Fifth Air Force (AF) charged with the air defense of Japan, and in the event, Korea. This command consisted of three fighter-bomber and interceptor wings (8th and 49th FBWs and 35th FIW) flying jet-powered Lockheed F-80C Shooting Stars and two independent all-weather fighter squadrons (68th and 339th F(AW)Ss) equipped with NAA F-82G Twin Mustangs, as well as a light bombardment wing [3rd BW(L)] flying Douglas B-26 Invaders, and one wing of four-engine Douglas C-54 Skymaster transports (374th TCW). Altogether, the Fifth AF had 342 serviceable combat aircraft, 31 reconnaissance aircraft and 26 transports available. Additionally, the command could call upon additional F-80C and F-82G units based on Okinawa and in the Philippines, as well as B-29 bomber groups of the FEAF's war-winning Twentieth AF.
(To be continued)

Douglas C. Dildy (SAFCH #844), USA.

End Notes

1. Known as the "Choguk haebang chŏnjaeng" or "Fatherland Liberation War" in North Korea and the "yuk-i-o jeonjaeng" ("6-2-5 War", after the date the war began) in South Korea.

2. Even after the departure of Soviet forces from North Korea in 1948, a number of advisors remained behind to assist Kim Il-Sung in the establishment of his armed forces. In May 1950, the Soviet Armed Forces General Staff authorized a total of 246 advisors, instructors, and "educational" personnel to assist the KPA and KPAF. However, only about half of these positions were filled (in October that year 123 personnel were in place, with 152 to 164 in the place during the next two years) because of the lack of officers and senior NCOs with experience both in higher headquarters (HQs) and in Far East Theater operations. Eleven of these individuals were placed in the KPA's general HQ with the rest being attached to KPA/KPAF divisions and regiments, including one of the aviation regiments. While strictly forbidden by the Soviet General Staff from crossing the 38th Parallel, these men were still able to periodically provide detailed reports of North Korean operations – and assessments of them – that are now stored in the Central Archives of the Ministry of Defense of the Russian Federation and the Archives of the President of the Russian Federation. These have provided a basis for several excellent publications outlining, and in some cases detailing, KPA/KPAF's Korean War operations and their results.

3. Kim Il-Sung's original name was Kim Sung-Chu, but he felt this was too pedestrian. Therefore, while

fighting Japanese occupation forces in 1935 "The Great Leader" adopted the name of a dead – and non-Communist – Korean guerilla leader (whose name meant "become the sun") as his own.

4. Commonly referred to as the "Korean People's Air Force Air Corps" (KPAFAC), this lengthy and cumbersome title will be abbreviated to KPAF for use in this series. The air arm's ground-based sister corps will not be addressed in this series.

5. The Yak-9P was the final development of the WW2 Yak-9D, the Soviets' relatively unrefined equivalent of the USAAF's NAA P-51D Mustang, being of a similar configuration: a low-wing monoplane, powerful inline engine, "bubble canopy", and belly-mounted coolant radiator. However, it was smaller, lighter, and about 60mph slower. The faster Yak-9U (U for uluchshennyi meaning "improved") version, propelled by the more powerful 12-cylinder Klimov M-107A engine, rated at 1,500hp (1,650hp for takeoff), was fielded at the end of WW2. The Yak-9P (P for pushyechnyi, or "cannon") upgraded the type's armament to a single 23mm VYa-23 cannon firing through the propeller hub and a pair of synchronized ShVAK 20mm cannons mounted atop the engine. First appearing in 1946, the Yak-9P's top speed was still 23mph slower than the P-51D (soon to be redesignated the F-51D once the USAF became an independent military service) with a superior climb rate and a heavy, bomber-killing punch. With less than half the Mustang's range, the Yak-9P was quite obviously more of

a bomber interceptor than an air-superiority fighter, but in the confined spaces of Korea, that was what was needed.

6. One British publication reported that the initial batch of KPAF Yak-9s were supplied by the People's Republic of China (PRC). However, more recent scholarship accessing the Russian archives shows that while the PRC placed its first order of warplanes from the USSR for "100 to 200 Yak fighters" on 26 July 26, 1949, the Soviets responded three weeks later (August 18) by agreeing, instead, to provide 120 Lavochkin La-9s; thus no Yak-9s were ever delivered to the PRC. This is because the USSR was already in the process of providing Yak-9Ps, most probably from Soviet air force Far East Military District (FEMD) fighter units re-equipping with jet-powered MiG-9s and MiG-15s, to Korea and insufficient quantities remained to fill the Chinese request. However, since there were also La-9 units re-equipping with the MiG jets, the former could be provided to China instead of Yak-9s.

7. The heavily armored and powerfully armed successor to the original Il-2, the Il-10 made its combat debut in the closing weeks of WW2. Powered by a 1,750hp (2,000hp for takeoff) Mikulin AM-42 V-12 engine, the Il-10 could carry four 100kg (220.5lb) bombs in internal bomb bays and another pair under the wings. It was armed with a pair of Nudelmann-Suranov NS-23 23mm cannon in each wing. Generally flown at lower altitudes, it had a top speed of 329mph (530km/hr) at 7,875ft/2,400m and 304mph (490km/hr) at sea level. The maximum range with a full bomb load was 497mi (800km) while flying at 193mph (310km/hr) at an altitude of 1,640ft/500m. Defense was provided by a single Berezin UBST 12.7mm heavy machine gun mounted in the rear cockpit.

8. The virtually unknown Yakovlev UT-2 was an open-cockpit, fixed-gear, all-wood monoplane powered by a 125hp Shvetsov M-11D five-cylinder radial engine. Originally it was designated the AIR-10, but since the

designation was also the initials of the purged Communist leader Alexey Ivanovich Rykov, Yakovlev changed the designation to a more politically correct "Ya-20" (Cyrillic "Я-20"), thus beginning the tradition of Soviet/Russian aircraft designations beginning with an abbreviation for the designer's surname. In Soviet military service it was designated the UT-2, *uchebno-trenirovochnyi* meaning "primary/advanced trainer".

9. The Ki-54c "Hickory" bears a strong resemblance to the Yak-16 twin-engine, ten-passenger light transport and its presence may have been one reason that USAF Intelligence reported in 1950 that the KPAF had 22 Yak-16s on strength. However, since only two Yak-16 prototypes were built and mass production was not authorized, it is very doubtful that the KPAF actually obtained any of these. They may have been initially included in the Soviet aircraft transfer orders because they were undergoing State Trials at the time and were anticipated to be available, but they failed to materialize because the competing Antonov An-2 was ordered into production instead. The two Yak-16 prototypes lived out their days as executive transports for the Yakovlev OKB (design bureau) and Factory No. 464 that built them.

10. Heijo airfield at Pyongyang became the KPAF's headquarters and main operating base. Yonpo became the second major base for combat (Il-10) units. The others were located at Sinuiju, Hamhung, Chongjin and Haeju.

11. These were at Sinmak, Pyonggang, Kumchon and Kansong.

12. Originally the embryonic ROKAF had been supplied with nine L-4s but one was lost in May 1950 when a pilot used it to defect to the North.

13. These were Suwon, Taegu, Kwangju, Kunsan and Cheju-do. At Taegu the ROKAF also possessed a former IJAAF Tachikawa Ki-9 (Army Type 95) "Spruce" biplane trainer.

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Appendix One

KPAF Order of Battle – June 1950

Air Forces Commander – General Van Len
Aviation Commander – Major General Wang Yong

1st Aviation Division – Commander: Major General Lee Whal

1st Assault Aviation Regiment (in training in June 1950)
Three Assault Aviation Squadrons – totaling 44 Il-10s

1st Fighter Aviation Regiment (in training in June 1950)
Three Fighter Aviation Squadrons – totaling 44 Yak-9Ps

1st Training Aviation Regiment (conducting training June 1950)
Two Training Aviation Squadrons – approximately 40 Yak-11 and Yak-18 aircraft

56th Fighter Aviation Regiment (partially operational June 1950)
Three Fighter Aviation Squadrons – totaling 44 Yak-9Ps

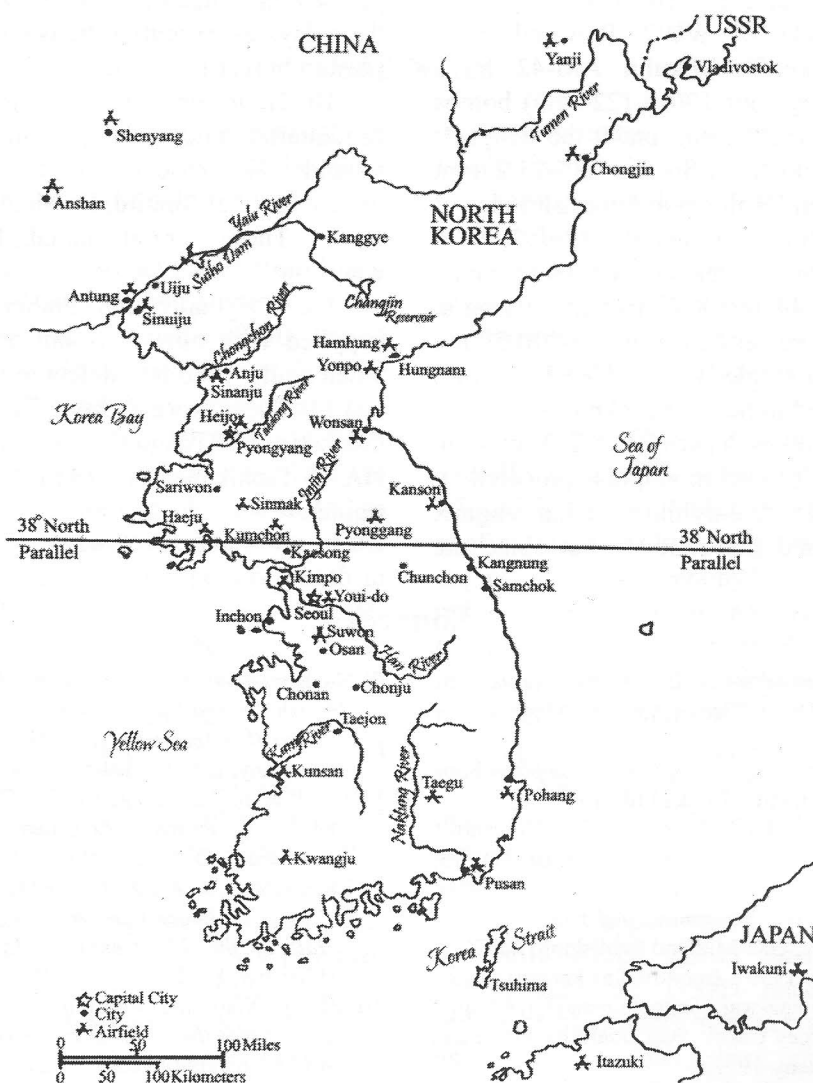
Only one Fighter Aviation Squadron operational (10 pilots)

57th Assault Aviation Regiment (partially operational June 1950)
Three Assault Aviation Squadrons – totaling 44 Il-10s
Only two Assault Aviation Squadrons operational (22 pilots and 17 gunner/radio operators)

Other Aviation Units

Combined Aviation Regiment (established June 1950)
Two Liaison and Transport Squadrons – approximately 24 Po-2, UT-2, C-47/Li-2, and Ki-54c aircraft

Corrected and modified as known; original posted on website:
www.korean-war.com/nokoreaairforce.html.



Mi-17-1V of the Aviacion del Ejercito Ecuatoriano

Jorge Delgado

Because of its comparatively low cost and its useful lifting capacity, the Russian Mi-8 series of helicopters is one of the most popular helicopters in the world. The Mi 171V, one of the many variants of this multipurpose helicopter, has the capacity to transport up to 22 passengers or up to four tons of cargo. In addition, it can be configured for VIP flights. An important factor in Ecuador is that it has the performance to operate in both the high temperatures of the Amazonian forest or in the rarefied air in the Andes Mountains. Its external fuel tanks allow it to fly for up to hours. It is certified for the standards of airworthiness by both the Federal Aeronautical Regulations of the U.S.A. and the Aeronautical Regulations of Federal Russia.

The Ecuadorian army's first experience with the Mi-17 was during the Cenepa Conflict with Peru in 1965. (See SAFO #90) During this conflict, the Ecuadorian army, realizing the need to transport troops and provisions to the place of the conflict in the shortest possible time, commandeered aircraft of civilian companies to enlarge its fleet of aerial transports. The aviation company ELIPET had a Russian Mi-17 helicopter HC-BSG which the Ecuadorian army operated during the conflict.

In 1976, based on the excellent performance of this Mi-17, the Ecuadorian army decided to buy seven M-17-1V helicopters for the Grupo Aereo 44 "Pastaza". These helicopters were assigned serial numbers E-480, E-481, E-482, E-483, E-484, E-485, and E-486. With this new equipment, the Armed Forces of Ecuador were ready in case of a new conflict.

But, accidents happen. The first one occurred on 25 March 1998. While E-483 was getting ready to land, one of the two motors failed on approach. The plane overshot the landing site and rolled over into a ravine. It was destroyed almost in its totality but no casualties were registered.

Another accident occurred on 9 February 1999 while E-486 was transporting a cargo of flowers to San Juan, a kilometer away from the city of Otavalo. The crew, were the officers Ricardo Cajas and Javier Suarez and two soldiers. The helicopter crashed, but the crew came away unharmed. However, 19 year-old Santiago Montalvo, who was in the vicinity when the accident took place, was hit by one of the main rotor blades and he lost his right hand. The Mi 171V was writing off. Apparently the mishap was caused by a mechanical malfunction because the ship was carrying only 1700 kilos of cargo, but it had a capacity for 4,000 kilos.

After 12 years of continuous operations, two new helicopters were purchased to replace the two lost in these accidents. On 21 January 2011, the Ecuadorian Army officially received two new Mi 171E; s/n E-487 and E-488. Also included with the order was a system for extinguishing forest fires named "Bambi Bucket". The official delivery took place on the 57th anniversary of the creation of the Army Aviation of Ecuador. This was celebrated at the facilities of the Aerial Brigade at the headquarters at Balbina near the city of Quito.

Jorge Delgado (SAFCH #862), Ecuador.



Mi 17-1V AEE-482 was the only Mi 17-1 with high visibility white, red, orange, and black scheme. Photographed at the Fernando Vasconez Army Flying School, Guayaquil, ca 2007.



Mi 17-1V in a camouflage scheme. The word EJERCITO is painted large on the tail boom. Photographed at the Army Flying School, Fernando Vasconez, Guayaquil.

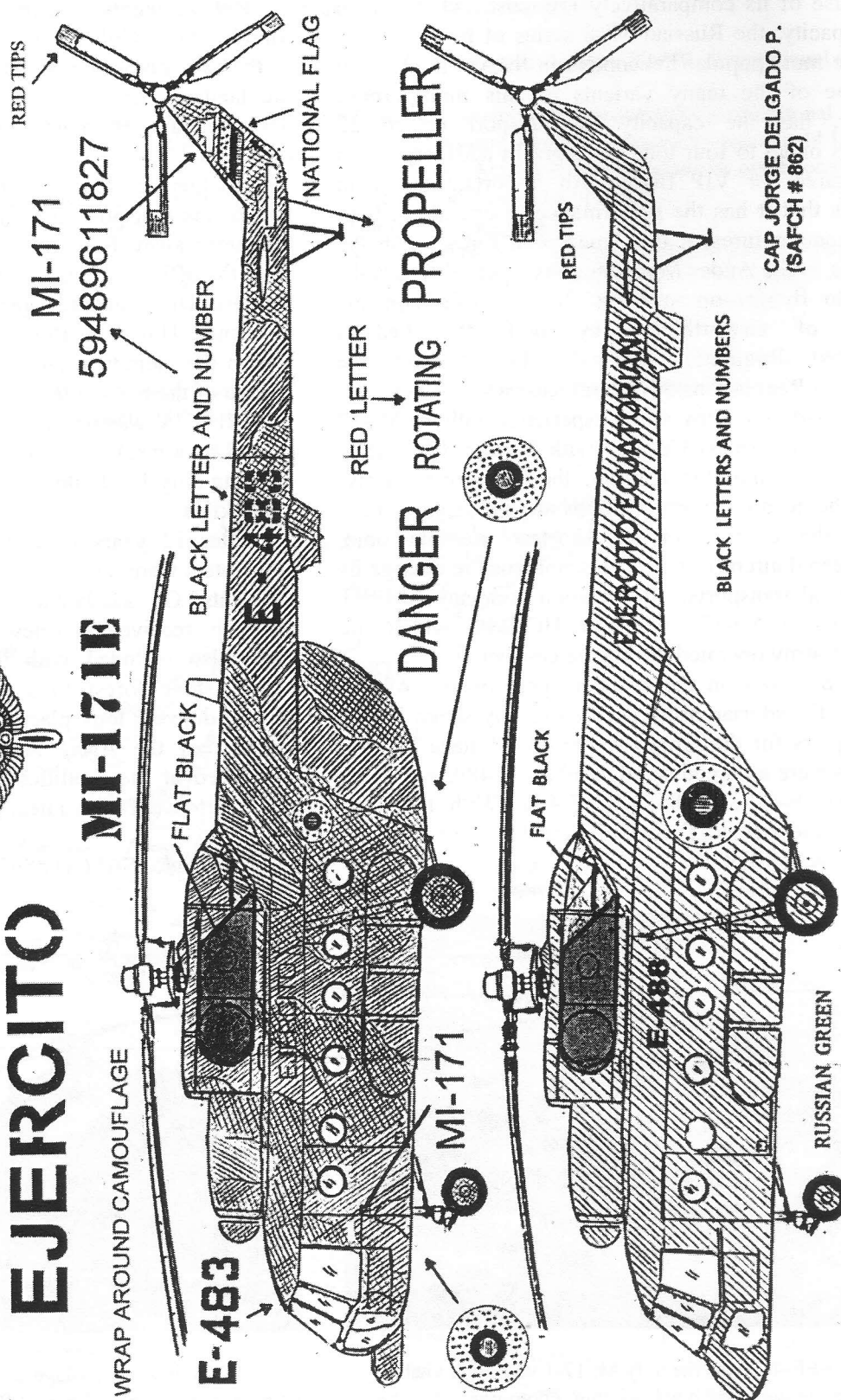
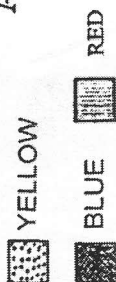
AVIACION DEL EJERCITO ECUATORIANO

MI-17-1V



EJERCITO

MI-171E



The Douglas C-47 in Katangese Service

Leif Hellström

When the Katangese Air Force (normally known as Aviation Katangaise, or Avikat) was formed soon after Katanga's secession in July 1960, it originally relied entirely on aircraft transferred from the Belgian colonial aviation – with one exception.

The Avikat lacked any transport aircraft larger than the de Havilland Dove, and the Belgians (who supported Katanga) decided that something more substantial was needed. The ubiquitous C-47 was an obvious choice, since it was already in widespread use in the Congo, both with the Belgian Air Force (FAB) and with the civilian airline Sabena. Two FAB C-47s were provided on short-term loan in late August or early September 1960 and given Katangese national insignia, while retaining their Belgian serials.

The C-47s were based at Luano airport in the Katangan capital Elisabethville and were immediately engaged in various transport duties. At least one of them was also used as a make-shift bomber, during the military campaign in the neighbouring Kasai province during September. Most likely the "ordnance" consisted of barrels of petrol, with a phosphorous grenade attached.

Within a few weeks, the two borrowed C-47s were replaced by two permanent transfers from the FAB, while the original aircraft returned to the FAB. The reason may have been that the "loaners" were specially equipped for photography (KP4) and reconnaissance (KFC8), respectively, while the two permanent transfers (K19 and K21) were plain transport aircraft. The two new C-47s were given Avikat serials KAT-02 and -03 as well as full Katangese markings. There is some indication that the two temporary aircraft may possibly also have carried these serials towards the end of their service.

The Avikat was originally an entirely Belgian operation, with Belgian aircrews only. From early 1961, volunteers from other countries also started to be employed, but the C-47s for the first year of the Avikat remained primarily a Belgian concern, even if some non-Belgians occasionally flew as co-pilots. Northern Katanga was the main area of military operations in early 1961 and the C-47s were engaged in supplying the troops in the field, flying almost daily runs to Kongolo in particular. This situation was to change little over the next several months.

Various brokers and dealers began trying their hand in selling all manner of equipment to the Avikat in 1961, after Katanga opened a procurement and recruitment office in Brussels. One Belgian company offered eight C-47s at 3.8 million Francs (about US\$ 76,000), while another Belgian dealer offered seven C-47s for US\$ 125,000 and numerous DC-3s in passenger version for as little as US\$ 15,125, presumably reflecting their condition.

The outcome was that the Avikat purchased one additional C-47, a former Swissair aircraft which arrived in Katanga around February 1961. It was serialised KAT-04 and painted up with national insignia. Apart from a few test flights, this C-47 remained permanently grounded at Elisabethville due to engine problems. It did have its right-hand engine dismantled at an early stage and this was never replaced, the aircraft instead being used as a spare parts source. In due course the other engine was also removed.

On 28 August 1961, the United Nations struck against the mercenaries serving with Katanga, intending to cripple the Katangese military forces by removing their foreign leadership and specialists. This certainly worked wonders with the Avikat which was largely grounded from this day on. The C-47s were all caught on the ground at Elisabethville with no-one to fly them. On 13 September, when fighting broke out between the UN and Katanga, the aircraft were all officially impounded by the UN. Neither of the three C-47s ever took to the air again. At the same time, the UN also grounded the several C-47s that had been used by the Air Katanga airline but these were soon flown out to Europe and returned to Sabena, who had leased them to Katanga.

The remains of the Avikat reformed in Kolwezi, which was outside UN control, and the personnel and aircraft that had escaped UN arrest gravitated there. Some additional aircraft were soon obtained, including a new C-47 that arrived on 29 October. It was purchased in South Africa, one of the countries that were quietly supporting Katanga. The C-47 was a civilian aircraft, which had served with Wenela Air Services, a company specialised in transporting labourers to and from the South African mines. The aircraft kept its civilian livery, with the name Wenela replaced by the rather cryptic titles "Courrier-Service," while the registration ZS-DFN was amended to KA-DFN. The civilian paint

scheme was just a smoke-screen, however, and the country prefix "KA" was never officially allocated to Katanga. In reality, the C-47 was operated under military control and by a military crew but by appearing to be a civilian aircraft, the UN was fooled – at least that was the intention.

It must be understood that the distinction between "military" and "civilian" aviation was not ironclad in the Congo, and perhaps even less so in Katanga. The Avikat transports would therefore often also carry civilian cargo or passengers to places where other means of transport were lacking, or sometimes simply if the crew got paid well enough to carry some extras. Jimmy Hedges, a British pilot with Avikat, later wrote:

I carried a large variety of loads in the DC-3 ships – food, ammunition and guns, women and children, wounded, household goods, medical supplies and army vehicle spares.

This C-47 did not survive for more than just over a month, when it was completely burnt out after being hit by Canberras in the UN air strike on Kolwezi on 6 December. The tail unit and wings were simply dragged clear of the apron and remained in place for at least a couple of years.

The Avikat gradually re-formed once again but it was clear that any large aircraft permanently based in Katanga were at risk from renewed UN air attacks. Pipers and even Doves could be dispersed and camouflaged in the bush with some success, but C-47s were simply too large to hide. The Katangans therefore went one step further than with KA-DFN and in effect outsourced its transportation to a foreign airline, Rhodesian Air Services. RAS was owned by Rhodesian Jack Malloch, who was to become notorious as a gun-runner in Africa in years to come. It is known that a RAS C-54 was directly financed by Katanga but the status of their C-47s is less clear. It is known that RAS C-47 VP-YTT was flying missions for Katanga from around January 1962, however, but it always remained based in Rhodesia. At least one Avikat pilot, Jan van Risseghem, was also officially employed by RAS for a few months in early 1962, to fly missions for Katanga.

The UN soon caught on to the ruse but there was not all that much they could do, as long as RAS were not caught red-handed with a military load. The missions inside Katanga could be dangerous enough, though, as the civilian Rhodesian crew of VP-YTT discovered on 28 July 1962, when officially taking some food, fuel and

passengers from Kolwezi to Kongolo. The subsequent UN report stated:

Following the river north bound, the aircraft was hit by gun fire when crossing the bridge 3 miles south of Kabalo. The captain claims that his altitude was 3,500 feet. Time 0912Z. The crew first heard one single bang, and then a burst hitting the aircraft, just like flying through hail. The gun fire was believed to be small calibre automatic gun. Probably 0.3 or 0.5. Immediately afterwards, the captain noticed oil flowing out of the left engine, whereupon he feathered left engine and turned to right and set course for Kamina. As the aircraft would not maintain altitude, after approximately 10 NMLS flying the course was altered for Manono. [...]

Losing altitude on the way, cargo was jettisoned along a line from approximate position Kasinge to position 0700N 2715E. [...] On the question why altitude could not be maintained on one engine, the Captain said that he had also some trouble with his right engine, reduced effect. Reaching Manono, height of aircraft was only 100-150 ft. above ground. A normal one engine landing was made at Manono, time 0959Z.

An inspection found seven bullet holes in the C-47, including one through the left propeller dome and one in a fuel tank. The UN suspected that the food had actually been air dropped by the two "passengers" and that the C-47 had then been hit while doing a reconnaissance run over Kabalo for the Katangan military but this was never proven.

The diary of one of Avikat's pilots, Jimmy Hedges, stated on 28 August that they were getting a DC-3 from Malloch in Salisbury. Soon afterwards, Air Links Ltd. in England applied for a licence to export two C-47s to RAS. The British authorities were suspicious and a telegram to the embassy in Salisbury, asking for information, stated that "there is a murky history giving rise to strong suspicion that aircraft are ultimately intended for Katangan government." Apparently some reassurances were received and in October 1962, VP-YUU was registered to RAS and likely then employed on Katangan work. However, the RAS C-47s remain borderline cases and were certainly not exclusively operated on behalf of Katanga, which would in any event have compromised the cover story.

In the meantime, the Avikat had in fact received a final DC-3 of its own. This aircraft had originally been built as a C-47 but in the 1950s it had been converted to a Remmert-Werner executive DC-3. This included upgrading the engines and avionics, adding landing gear

doors, removing the freight door and fitting panorama windows and a VIP interior. The DC-3 had belonged to Lucienne Dhotelle, a French singer of 1920s fame who was known as "Môme Moineau." She was married to a rich Puerto Rican businessman who had given her the DC-3 as a gift and had had it named "Moineau Flyer II" (the first Flyer had been a Beech 18). Dhotelle had met Katangan President Tshombe in Europe and had been much impressed by his cause, and decided to donate her aircraft to Katanga. Her intention was for Tshombe to use it as a VIP transport and it was taken onto Avikat charge in late September 1962 with the serial KAT-40.

The interior of the "Moineau Flyer II" was very opulent and included a large table in dark wood and ivory, with a map inlaid in its surface. There were plush chairs, a bathroom with a bathtub and even a chandelier. The cabin was very spacious, only intended for 10-12 persons. Everything was shiny and chromed and very nicely kept, even the engines. Avikat pilot Roger Bracco remembered it as "a superb machine, converted into some kind of luxurious sitting room with wide leather sofas and things like that." But the need for cargo aircraft was greater than for VIP transports and, apparently with some regret, Tshombe approved to have the DC-3 re-converted. All of the VIP interior was ripped out and the aircraft was then used to transport dried fish and other relief provisions and soon stank to high heaven. Jimmy Hedges was appointed chief pilot of the DC-3 but it was also flown by other mercenaries.

The short history of the Katangese C-47s was almost at an end, however. In late December 1962, the Avikat received warning of an upcoming UN offensive against Katanga and as a precaution the majority of its aircraft were evacuated to Teixeira de Sousa in Angola. Most of the aircraft never returned to Katanga but the DC-3 did. From 13 January 1963, it made at least three trips to Kolwezi to evacuate the Katangese treasury, consisting of 300 million Katangese francs packed in 60 boxes. Three tons of gold are also said to have been flown out. The last flight out, with Jan van Risseghem as pilot and Jock MacDonald as co-pilot, actually took place four days after the end of the secession, on 21 January. The "Moineau Flyer II" took off from Kolwezi at 05:30 hours, just hours before UN troops arrived to occupy the airfield.

The DC-3 ended up at Luanda, the capital of Angola, and was parked at the airport with several other former Avikat aircraft, after the Avikat had been forcibly disbanded by the Portuguese and its aircraft interned on 19 February 1963. Van Risseghem tried to have the DC-3 entered on the Belgian civil register but

without success, presumably due to paperwork problems. The aircraft was noted in Luanda some time later by the British Consulate-General, which reported that it was "in a rather derelict condition." The diplomat added that, "nothing would have induced me to take a ride in it." A Belgian air officer was sent down to Angola in July 1965, to see if any of the aircraft stored there could be put into order and returned to the Congo. His conclusion was that the DC-3 would cost some US\$ 56,000 to repair, which was hardly worth it, and so it was left at Luanda and no doubt scrapped some time later, possibly in 1967. Some reports have claimed that it was incorporated into the Portuguese Air Force but that seems unlikely, considering its condition.

Of the other Avikat C-47s, KAT-02 and -03 were inspected by the UN at Elisabethville in February 1963 and the verdict was that "repair might be possible but very doubtful," due to their poor condition, while KAT-04 was deemed beyond repair. Even so, all three were officially handed over to the Congolese government by the UN on 14 February 1964 but remained at Elisabethville where they were scrapped in due course.

Painting and Markings

The Katangese C-47s did not carry a uniform colour scheme and therefore it is best to go through them singly or in pairs:

KP4 and KPC8: Overall natural metal with white top and dark blue and white cheatlines. Black anti-glare panels. De-icer boots (at least on KP4). Belgian national insignia overpainted by hand with Katangese roundels (not the early, square insignia) and fin flashes. Serials on fin tip and nose in black. Belgian military registrations on fuselages and on top and under wings sloppily overpainted in silver.

KAT-02: Overall natural metal with white top and dark blue and white cheatlines. Black anti-glare panel. No de-icer boots. Katangese roundels in six positions and large Katangese fin flashes. Serial in black on the fuselage, above the wings and under the wings in a normal typeface. Red prop warning stripe around the front fuselage.

KAT-03: Overall natural metal with white top and medium blue and white cheatlines. Black anti-glare panel. De-icer boots. Katangese roundels in six positions and large Katangese fin flashes. Serial in black on the fuselage and under the wings (not above) in a typeface that got narrower towards the rear and towards the wing tips. Red prop warning stripe around the front fuselage.

KAT-04: Overall natural metal with red cheatlines (Swissair livery). Black anti-glare panel. No de-icer boots. Swissair titles overpainted in white. Katangese roundels carried under the wings and flashes on the fin, and the serial in black across the undersides of the wings. Other markings were likely similar to those on KAT-02 and/or -03 but exact details are not known.

KAT-40: Overall white with light medium blue cheatlines on fuselage and cowlings, with white and black trim. Large panels on wings in same colours. Black anti-glare panel. De-icer boots. Wavy Katangese flag tied to blue spear painted on fin. Serial in black on the fuselage, above the right wing and under the left wing. The badge on the nose is a chubby little bird, in gold and brown. "Moineau Flyer II" titles in light medium blue and white.

KA-DFN: Overall natural metal with white top and fin decoration and dark blue cheatlines and fuselage decoration, outlined in another colour, possibly red.

Black anti-glare panel. No de-icer boots. Registration in black on the fuselage, above the right wing and under the left wing. "Courrier-Service" titles most likely black.

VP-YTT and -YUU: Overall natural metal with white top and medium blue cheatlines with narrow red line below it. Black anti-glare panel. De-icer boots (VP-YUU only). Red fin with white "R" logo. Red "Rhodesian Air Services" titles. Red and yellow seahorse emblem on nose, with black detail. White registration on fuselage, black registration on wings.

A decal sheet for KAT-03 in 1/72 scale is now available from MAV Decals of South Africa. Website: <http://www.aviationmegastore.com>.

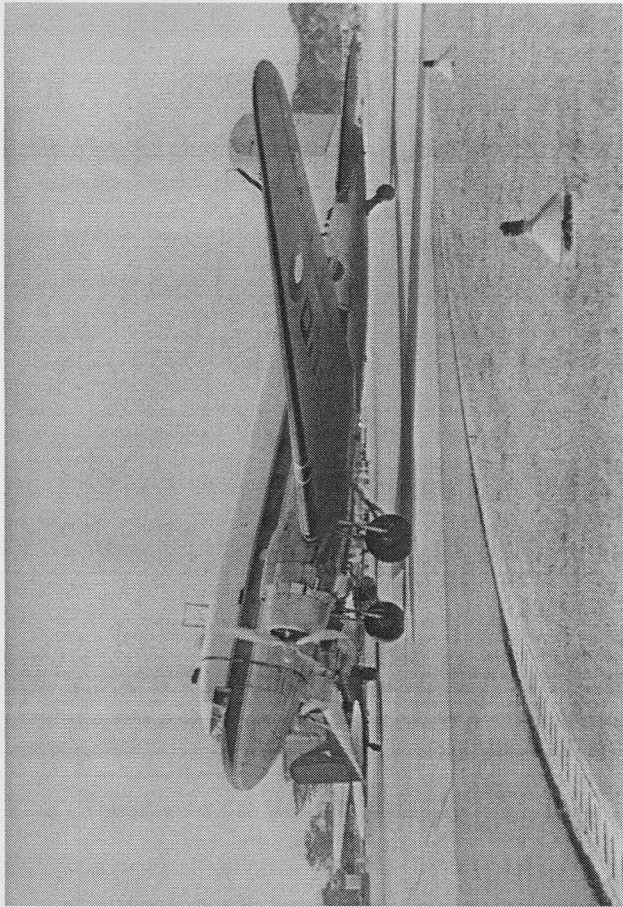
Leif Hellström (SAFCH #786), Tullinge, Sweden, e-mail: leif@leifhellstrom.com

Captions for photos on pages 17-20

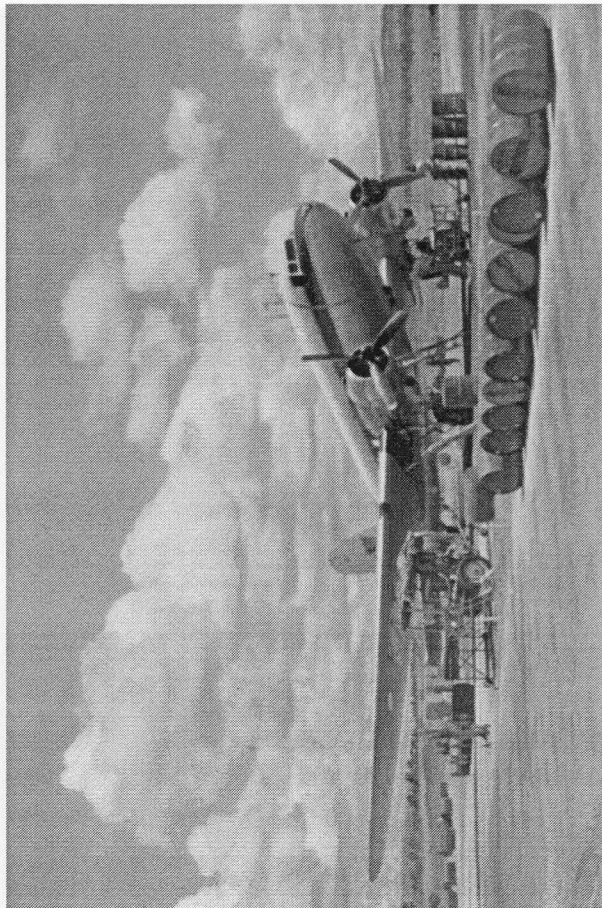
- 1-2. One of the original C-47s of the Avikat, KP4 was loaned to the Katangese by Belgium and is seen here in September 1960. As is obvious, it was given full Katangese national insignia but the Belgian military registration (as opposed to serial) was only perfunctorily covered with paint. In the background is another C-47 on loan from Belgium, but for civilian purposes. (J J Mans via J-P Sonck)
3. KAT-02 was one of the permanent transfers to Avikat from Belgium. It was identifiable by its lack of de-icer boots. Note the "KAT" prefix under the wing (with "-02" under the other wing) and also the black area painted under the wings, outboard of the engines; this was common to all the ex-FAB C-47s. (via Dave Becker)
4. The rear fuselage of KAT-02, showing the style of the serial carried on this aircraft. The rudder was sprayed silver. (via Dave Becker)
5. A typical scene from a Katangese airfield upcountry, with a mix of military personnel and civilian locals taking an interest in KAT-02. The serial on top of the wing of this particular C-47 is clearly visible. (via Dave Becker)
6. A nice sideview of KAT-03 at Elisabethville in 1961, clearly showing the peculiar "growing" typeface applied to the aircraft. The cheatline was a lighter blue colour than normal on former FAB C-47s. (via Dave Becker)
7. Katangan President Tshombe, in dark suit, talking to Avikat commander Lt-Col Volont during a visit at Luano airport in Elisabethville in April 1961. KAT-03 in the background is looking somewhat dusty. As can be seen, it did not have the serial repeated on the top of the wings. (via J-P Sonck)
8. A close-up taken at Kongolo in December 1960, showing the peculiar typefaces used for the serial numbers on KAT-03. The undersides are natural metal, and not white as it may appear. Note also the black area behind the exhaust under the inboard part of the wing. (via J-P Sonck)
9. One of Tshombe's peculiarly uniformed motorcycle outriders posing in front of KAT-04 in April 1961. The C-47 has already been stripped of one of its engines. A roundel and the number "04" is just visible under the wing. (via J-P Sonck)
10. KAT-04 literally put out to grass at Luano airport in January 1963, while interned by the United Nations. The Katangese markings have been removed but traces of the fin flash and fuselage serial are still visible, as is the red Swissair livery. Also note the unusual direction finder under the nose. (F22)
11. C-47 KA-DFN trying hard to look like a civilian aircraft at Kolwezi airfield in the autumn of 1961 but it was in fact operated by the Avikat. (via Dave Becker)
12. The sorry remains of KA-DFN at Kolwezi after being destroyed in a UN air attack on 6 December 1961. Note the unusual white over natural metal fin decoration, a left-over from its previous operator Wenela Air Service, as well as the registration just visible on top of the right wing. (Maurice Simon via J-P Sonck)
13. Chartered RAS C-47 VP-YTT at Kolwezi in 1962, with the wreck of KA-DFN behind it. It was quite colourful with its red fin and certainly no attempt was made to tone down the civilian look, despite it being used in a war zone on semi-military missions. (Jimmy Hedges via Dave Becker)
14. The "Moineau Flyer II" was the Avikat's last own Skytrain and quite different from the others. Although built as a C-47, it had been converted to executive configuration: note the DC-3 style door and the panorama windows. It had a fluttering Katangan flag painted on the fin and was generally looking quite smart. (Jimmy Hedges via Dave Becker)
15. This enlargement from a UN high-altitude reconnaissance photo taken by a SAAB S 29C over Kolwezi in November 1962 clearly shows the large, blue panels on the wings of KAT-40. (F22)
16. In exile! Mercenary pilot Jimmy Hedges in front of KAT-40 in early 1963, after the withdrawal to Angola. Note the golden bird badge on the nose as well as the trim painted on the nacelles. The Katangese markings have already been removed. (via Dave Becker)



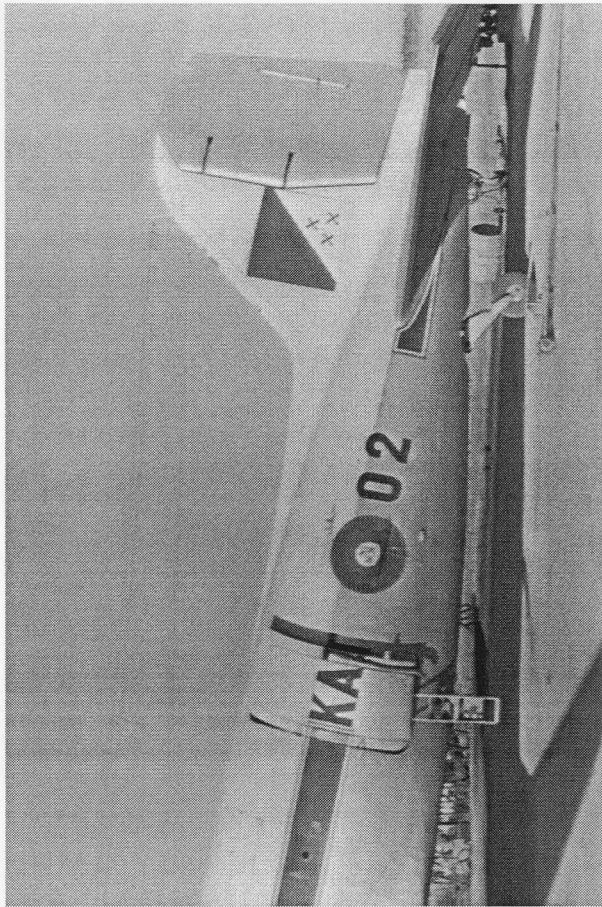
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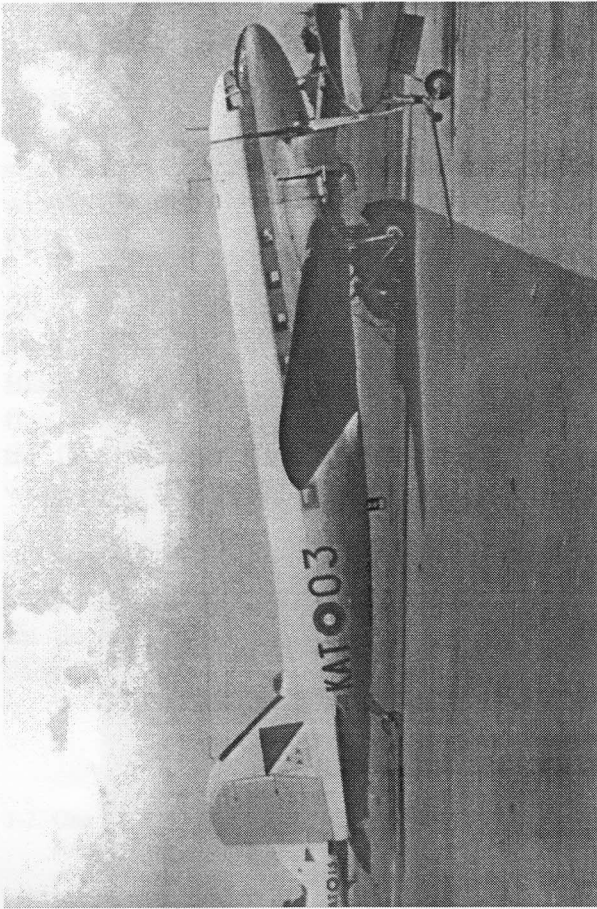
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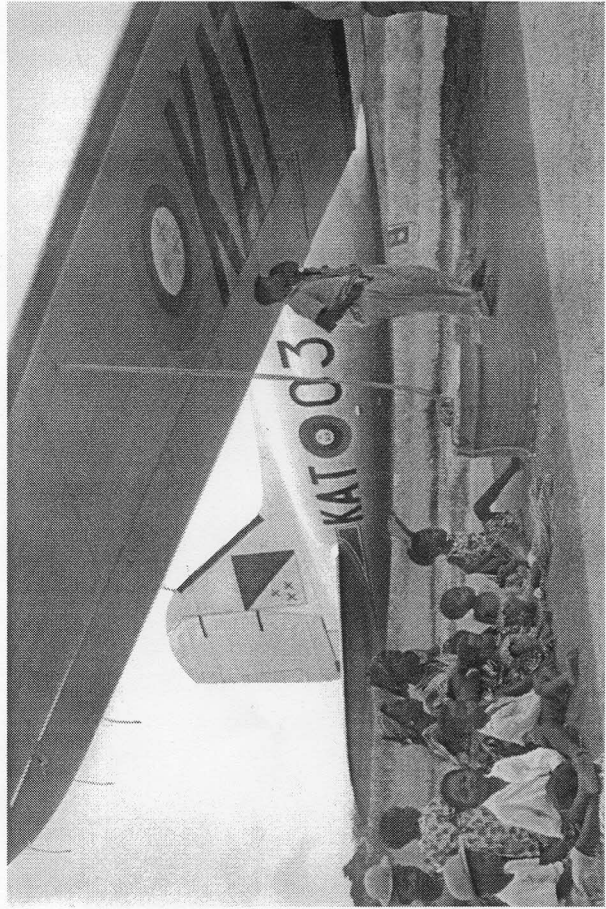
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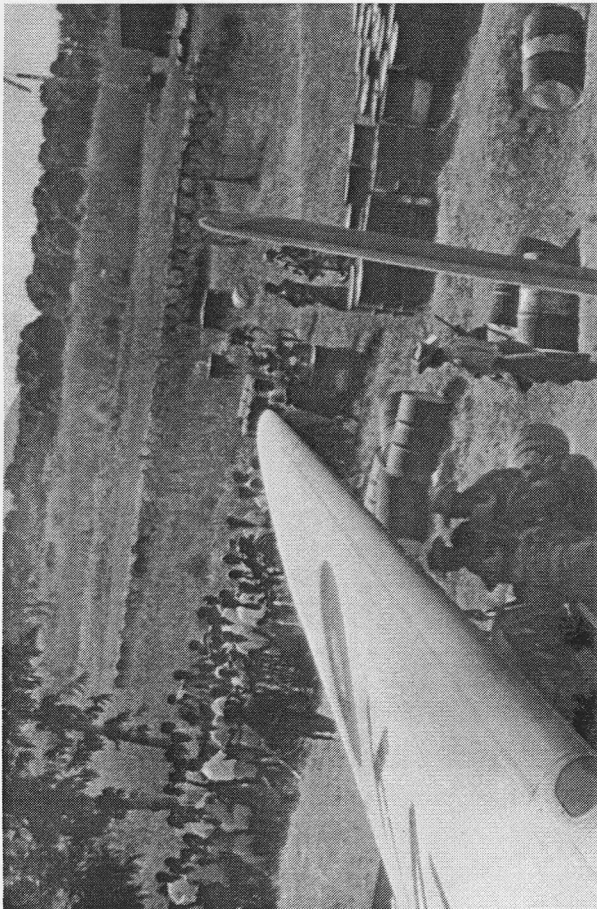
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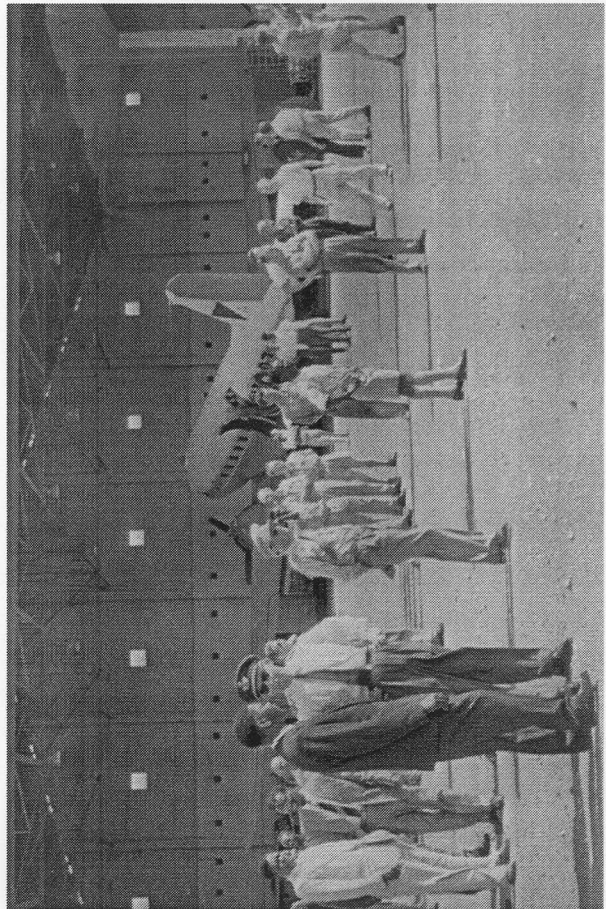
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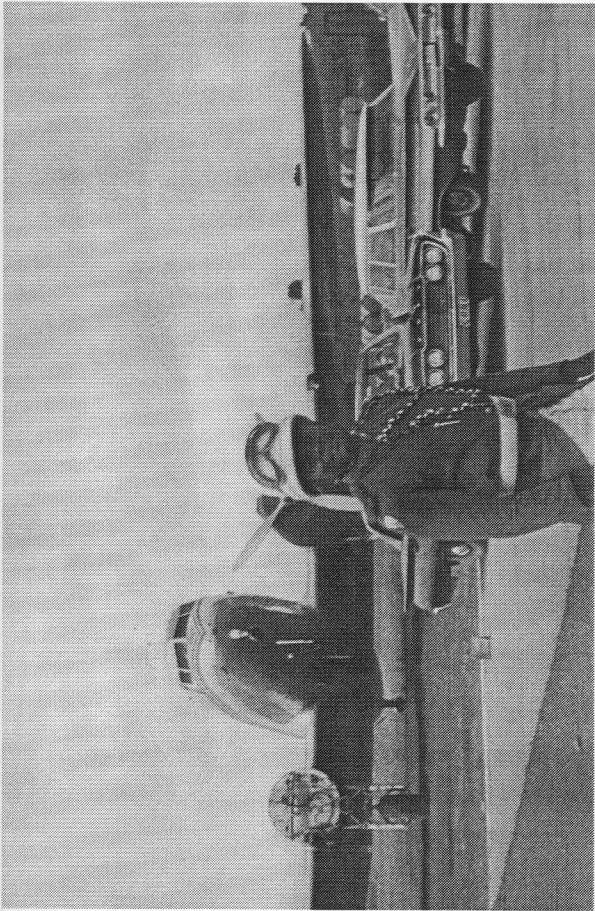
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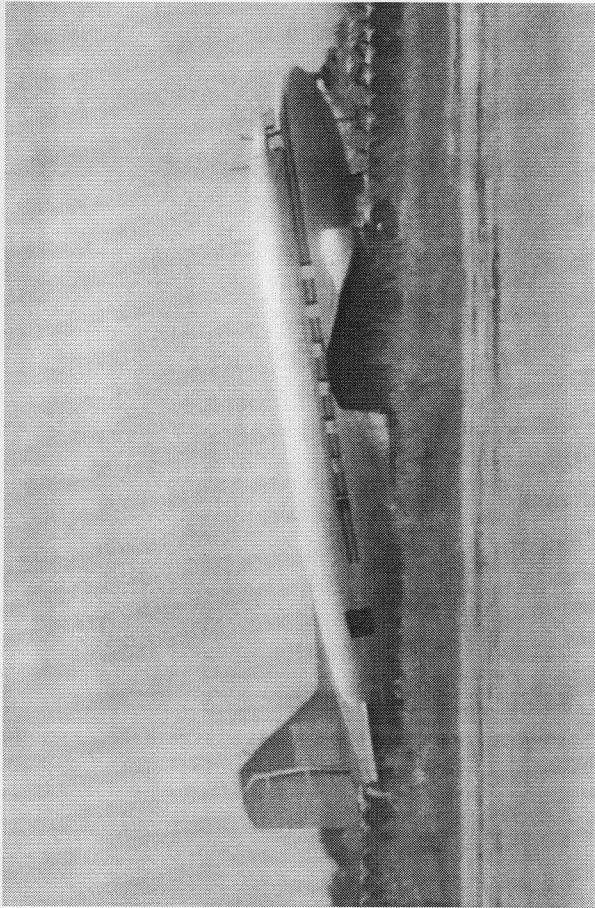
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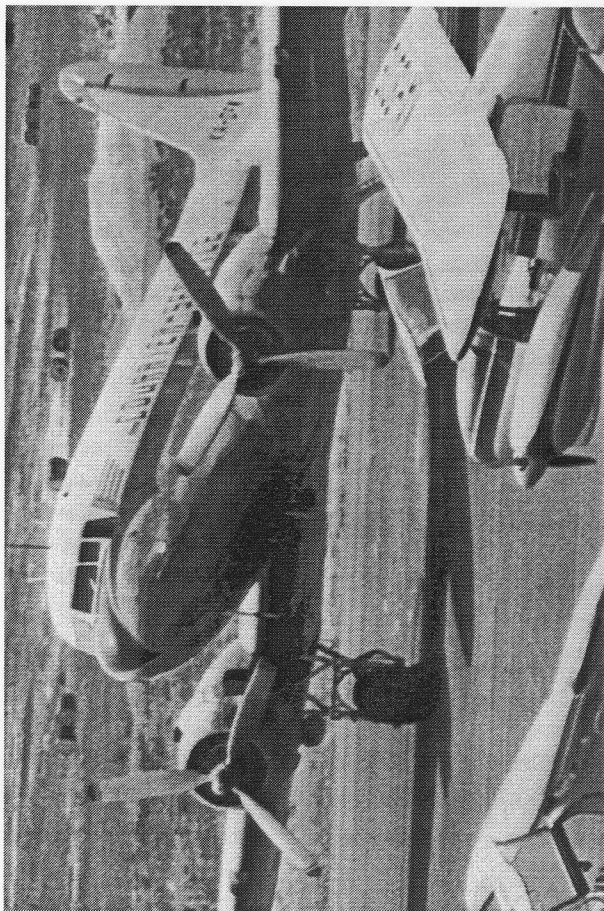
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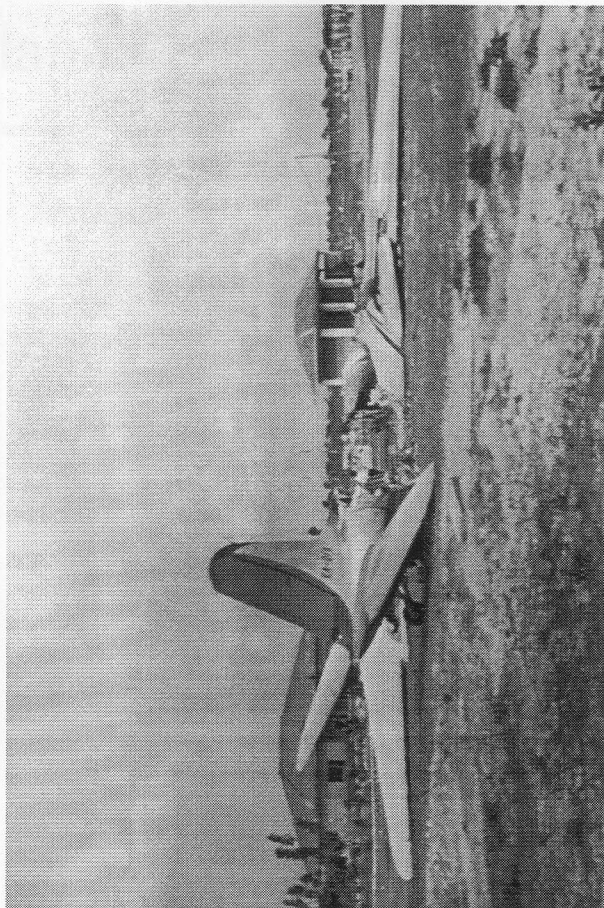
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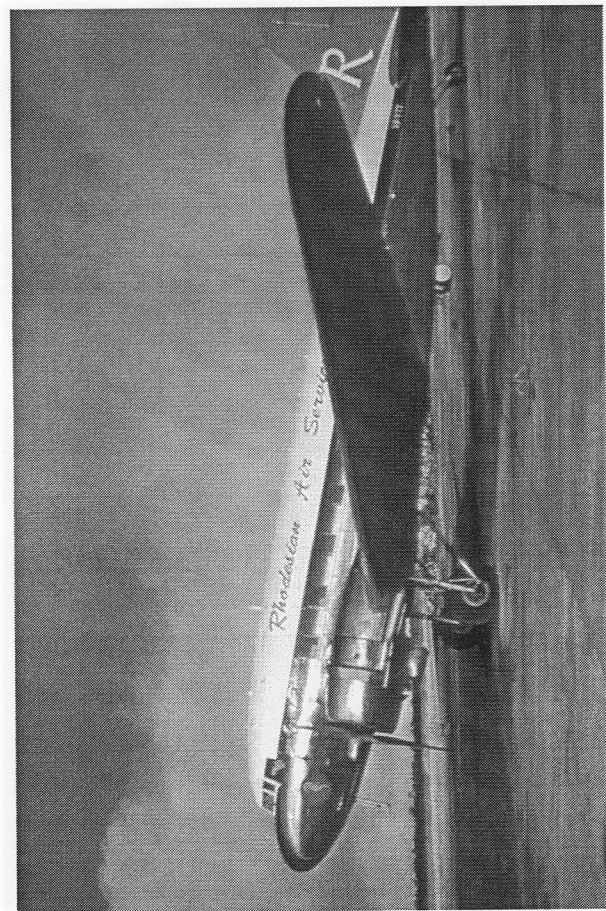
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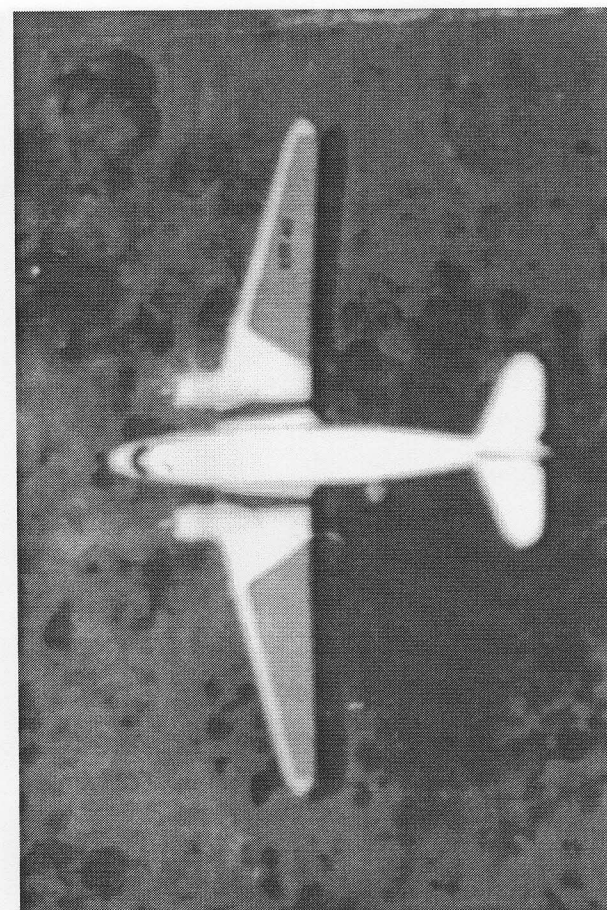
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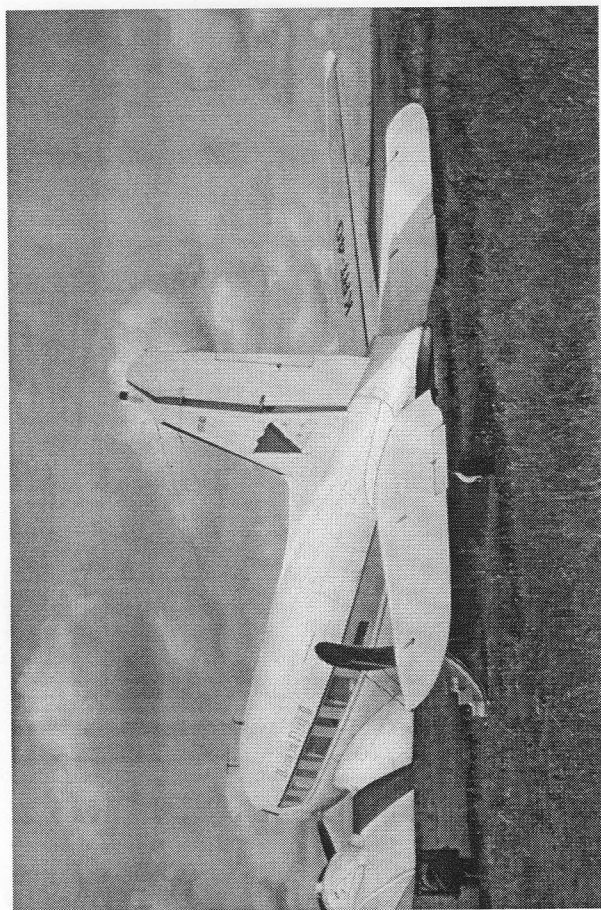
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The Lapland War

Kari Stenman

[Editor's notes: This article is a translation (by the author) of a chapter that appeared Batailles Aériennes #54 "*Angles finlandais contre Etoile Rouge - a guerre de Continuation: 2^e partie*" which was reviews in SAFO #136. The following list is presented for readers unfamiliar with FAF designations:

BL	=	Blenheim IV
BW	=	Brewster 239
DB	=	Ilyushin DB-3
DF	=	Ilyushin Il-4
DN	=	Dornier Do 17Z
FK	=	Fokker C.X,
JK	=	Junkers Ju 88A
MS	=	Morane-Saulnier MS.406
MSv	=	Mörkö Morane
MY	=	Myrsky
PE	=	Petlyakov Pe-2

To guide the reader to some of the places mentioned in the article a map of Finland is presented. This map is a reproduction from Batailles Aériennes #52 "*Angles finlandais contre Etoile Rouge - a guerre de Continuation: 1^e partie*". Although the Arctic Circle is not shown on this map, it passes directly through Rovaniemi. Many thanks to Kari Stenman, the author, and to Michel Ledet of AVIONS for permission to publish this translation and map.]

On 4 September 1944, the Continuation War between Finland and the Soviet Union ended. The agreement of cessation of hostilities included a requirement that German troops in Finland were to be either stripped of arms, or expelled from the country by 15 September 1944. With more than 200,000 German troops of the 20th Mountain Army still in the country north of the Oulu-Vienan-Kemi line, supported by an air detachment of more than 200 military aircraft, the task was impossible from the start.

On 4 September, the Air Force set up Special Staff Sarko, with Col Olavi Sarko commanding, to conduct the air war in Lapland. On 15 September, Col Sarko was appointed air commander of Northern Finland, and TLeLv 14 was subordinated to him. Lentorykmentti 2 and LeR 4 were also ordered to prepare to participate in the war in Lapland.

On 19 September, the Russian-led Allied Control Commission issued a flight ban for all Finnish Air Force planes. This order was modified on 1 October allowing Special Staff Sarko to fly against the Germans in the north and to hunt for German submarines at sea. The commander of the Finnish Air Force ordered Sarko to initiate flight activity against the Germans. For this he was to have operational control of Lentorykmentti 2 and LeR 4. His HQ was established at Oulu.

Of the units under Sarko's command, the Morane flight of TLeLv 14 had moved to Paltamo at the east side of Oulujärvi on 21 September. The III Army Corps, formed in Lapland, had started its attack three days earlier, but real action only began when the Finns made a surprise landing in the rear of the Germans in Tornio on 1 October.

On 2 October Lentorykmentti 2 was tasked with interception, reconnaissance along main roads, and escort of LeR 4 bombers. The Morane squadron of TLeLv 14 was already based in Paltamo and flew its first reconnaissance flights with a pair of Moranes. Ten Brewsters of HLeLv 26 moved from Onttola to Vaala at the northwest corner of Oulunjärvi. This squadron was given the task of covering the invasion fleet of the III Army Corps while en route from Oulu to Tornio. The Ghost Morane flight of HLeLv 28 arrived in Vaala.

LeR 4 began its war missions in Lapland as a single plane of PLeLv 48 took off in the morning to photograph the airfields of Kemi, Rovaniemi, and Kemijärvi. Due to clouds, only Kemi was photographed. A BL plane of the same squadron managed to photograph the other fields.

The first offensive mission of LeR 4 was to bomb German troops, vehicles, and columns which were retreating along the main roads to Rovaniemi. The squadrons took off at intervals from their bases some 500 km away. First off at 15:30 was PLeLv 46 with 1Lt Reino Lampelto and his five planes (DN-52, 57, DF-23, DB-17 and 19); they bombed troops on the Kemi-Rovaniemi road and the railroad. PLeLv 44 came in with Maj Tauno Melleri's ten planes (JK-253, 271, 256, 272, 252, 273, 258, 260, 270 and 263) between 15:40-16:47 to bomb columns between Kemi and Rovaniemi and again on the Ranua-Rovaniemi road. At five o'clock, PLeLv 42, Capt Tauno Kangas and his 13 planes (BL-197, 166, 165, 156, 196, 169, 200, 199, 168, 198, 162, 178 and 161), bombed marching columns on the Ala-Portimojärvi-Rovaniemi road. Flak shot down BL-198. The squadron landed at Paltamo. Maj Esko Ahtiainen led the seven planes of PLeLv 48 (BL-201, 171, 172, 120, 205, 204 and 190) as they bombed columns on the Ala-Portimojärvi-Rovaniemi road between 16:40-16:47. The squadron landed at Paltamo.

All bombs were dropped at an altitude of less than 1000 m, and the Finns reported many direct hits on columns, but the Germans considered the damage minimal. The northern bombing offensive became more of nuisance level because German radar-controlled flak shot through clouds and forced the bombers to higher altitudes reducing accuracy.

On 3 October, 1Lt Erik Teromaa led HLeLv 26 to Oulu from where one flight turned north along the coast. At the Bay of Bothnia, they discovered the III Army Corps' shipping convoy en route to land at Tornio where advance parties had already fought intense battles. The flight met a German Ju 87D detachment apparently intent on attacking the convoy. The Stuka formation opened fire on the Finns and in the battle that ensued, two Ju 87s were shot down and three fled the scene smoking. The Germans on the other hand reported having had only six planes in the air and none lost. 1Lt Teromaa wrote: "Between 13:15-15:45, altitude 500-50 m, as I was on reconnaissance with 8 BWs along the Kemi-Rovaniemi road we met 12 Ju-87s southbound. At first we wondered whether to fight but as the Stukas opened fire first, we decided to fight. I fired at the far wingman, his engine began to smoke, and he broke formation to

descend and ultimately crash-land in a swamp between Ristijärvi and Louejärvi. Another plane fired at me and I was hit in the fuel tank and an explosive bullet hit the cockpit wounding me slightly with shrapnel in my hand and thigh. After this I fired at another Ju 87 but with no results. The Stukas dropped their bombs as we attacked them. They eld formation very well all through the battle, machine gunners gave concentrated fire and it was very accurate. SSgt Oiva Hietala saw the Stuka crash in the swamp. My plane was BW-361."

A flight by 1Lt Bruun was flying from Oulu out to the Bay of Bothnia when it met a solitary Ju 88 diving on a ship. They attacked it and one engine began smoking. Later a crashed Ju 88 was found east of Kemi; it is probable this was the plane the Brewsters had damaged.

A flight of Moranes of TLeLv 14 reconnoitered the Taivalkoski-Posio direction and a Ghost Morane flight of HLeLv 28 went to check on Sarajärvi and Jäkälävaara.

On 4 October, all planes of Sarko's command stayed on the ground. On the next day German flak shot down a PLeLv 48 Blenheim as it reconnoitered the traffic in the Kemi and Tornio direction.

On 6 October, the Air Force HQ issued an order to form Flight Group Sarko, commanded by Col Sarko, and the staff of LeR 2 was designated as its staff. It was ordered to move to Oulu immediately. Flight Group Sarko had LeR 2 completely and LeR 4 operatively subordinated to it. HLeLv 34 of LeR 3 was also subordinated to Sarko, but it never moved to the operating area. Detachment Jauri was formed for transport and replenishment of infantry patrols, operating amphibious planes from Pyykösjärvi.

At this point, the squadron locations were the following:

LeR 2	Col Harju-Jeanty	Onttola	
TLeLv 14	Maj Kurimo	Paltamo	
2. Flight	Capt Vuorinen	Paltamo	7 MS
HLeLv 26	Maj Metsola	Vaala	
1. Flight	1Lt Teromaa	Vaala	10 BW, 3 FK
HLeLv 28	Maj Sovelius	Vaala	
1. Flight	Capt Turkki	Vaala	8 MSv
LeR 4	LtCol Gabrielsson	Luonetjärvi	
PLeLv 42	Maj Kepsu	Paltamo	
1. Flight	Capt Kangas	Paltamo	5 BL
2. Flight	Capt Palosuo	Paltamo	4 BL
3. Flight	Capt Huhtala	Paltamo	5 BL
PLeLv 44	Maj Meller	Rissala	
2. Flight	1Lt Iisalo	Rissala	5 JK
3. Flight	Capt Saarinen	Rissala	6 JK
PLeLv 46	Capt Pesola	Luonetjärvi	
1. Flight	Capt Vehmanen	Luonetjärvi	3 DN
2. Flight	Capt Lehto	Luonetjärvi	5 DB, 3 DF
PLeLv 48	Maj Ahtiainen	Paltamo	
1. Flight	Capt Siirilä	Paltamo	2 BL
2. Flight	Capt Ranta	Paltamo	2 BL, 1 PE
3. Flight	Capt Platan	Paltamo	2 BL

Capt Kangas and his 12 Blenheims of PLeLv 42 attacked columns heading north on the road north of Tornio while six PLeLv 44 Junkers bombers led by Capt Saarinen attacked the Aapajoki railroad and vehicle bridges north of Tornio, while they hit the railroad, the bridges remained usable. PLeLv 46's

Capt Pesola took two Dorniers and three DBs to bomb the Aapajoki railroad and vehicle bridges north of Tornio. PLeLv 48 flew to Vaala the next day.

On 7 October, the Russian troops began their general offensive against the Germans on the Arctic Ocean front. Within three days a detachment of 1/NSGr 8 with fifteen Stukas and 9/JG 5 with six Messerschmitts were sent to fight the Russians instead of the Finns. After that the Germans were seen in the air by the Finns only a couple of times. However, their accurate and effective radar-controlled flak remained a deadly foe and caused heavy losses to both LeR 2 and LeR.

The III Army Corps took Kemi on October 8, and set out for Rovaniemi where other parts of the Corps were advancing via Ranua and Posio. Some troops were attacking up the valley of River Tornio towards Muonio.

LeR 4 sent all its squadrons to bomb the Germans retreating from Tornio and Kemi towards Rovaniemi. PLeLv 42 attacked in the daytime with eight BLs and in the afternoon with nine more. Led by Capt Kangas, PLeLv 44 twice attacked columns of German troops and vehicles retreating to Rovaniemi. Two JK were attacked by German fighters. PLeLv 46 made two attacks on the traffic on roads and railroads between Kemi and Rovaniemi, led by Capt Vehmanen and Capt Kataila. PLeLv 48 in turn sent three BLs of Capt Ranta and three of Capt Platan. The crowded road columns were hit badly while Brewsters flew escort.

The HQ of LeR 5 was disbanded and PLeLv 6 was attached to LeR 4. The task of the squadron was to hunt for and attack German submarines on the western Gulf of Finland, Bothnian Sea, and the Bay of Bothnia. The squadron flew from Turku, Pori and Vaasa.

On 10 October, LeR 4 with 23 planes bombed German troops along the road between Rovaniemi and Ranua. The six PLeLv 44 planes (JK-253, 256, 272, 258, 263 and 270) were led by Maj Meller. The observer in the lead plane, 2Lt Arponen, wrote this report: "Mission: to bomb troops in the Taipale-Perunkajärvi-Jokilampi region. Bombs 14x250kg and 50x50kg. Between 15:55-15:58 six planes attacked troops on the road and in a village. Direct hits were seen among troops and on roads. A hit was scored on the bridge across the river flowing from Perunkajärvi. At least four Me 109s attacked our formation and fired on many planes, at least JK-253, JK-256 and JK-263 were attacked. JK-256 did not return to base and we know not its fate." It was the Messerschmitt pilot Ofw Rudolf Artner of 9/JG 5 who shot down this Junkers.

On 15 October, TLeLv 14 moved to Pudasjärvi, HLeLv 28 having been annexed to it four days earlier. One MS pair reconnoitered road traffic north of Rovaniemi. HLeLv 26 sent a Brewster flight to check out the Rovaniemi-Kemijärvi road.

One PLeLv 44 Junkers reconnoitered in the Kemijärvi and Pelkosenniemi direction. Another Junkers which went out to reconnoiter Ivalo was shot down by the airfield flak at Rovaniemi as the JK was on its return leg.

On 16 October, the troops of III Army Corps which had attacked from Kemi and Ranua took the badly destroyed town of Rovaniemi. Detachment Lagus went forward on the Arctic Sea Road towards Inari, and Detachment Pajari headed to Muonio via Kittilä; there were other parts of the III Corps headed that way too along the River Tornio valley.

TLeLv 14 reconnoitered the areas east and north of Rovaniemi with two pairs of Moranes and they saw that Rovaniemi was in flames. HLeLv 26 moved to Kemi.

The ground complement of HLeLv 34 had made it to Kemi when Col Sarko ordered the squadron to move there too on 17 October. Bad weather prevented the move.

The Moranes of TLeLv 14 had their final flights of the war on 18 October when pairs of MS and MSv planes reconnoitered Kemijärvi and Vuojärvi. The front was passing outside of the operating range of the planes. HLeLv 26's Brewsters moved from Vaala to Kemi and they were given the additional task of interception around Kemi and Tornio. As four planes reconnoitered north of Rovaniemi, the very accurate flak of the Germans claimed two Brewsters at Marrasjärvi.

PLeLv 42, PLeLv 44, and PLeLv 48 moved to Kemi, which had been repaired after the Germans blew up the field as they left. Capt Palosuo led twelve BL planes to bomb troops on the Ounasjoki-Kittilä road. Due to bad weather, it was a low-level attack and flak hit two planes, one of which crashed and the other bellied in at Kemi, where the rest of the detachment landed as well. PLeLv 48 sent Maj Ahtiainen with six BLs to bomb columns on the Pello-Muonio road and one plane of the squadron reconnoitered the Rovaniemi-Kolari-Yli-Tornio road, bombing targets of opportunity.

On 21 October, PLeLv 42 sent Capt Kangas and his nine Blenheims and PLeLv 48 sent Maj Ahtiainen with four planes to bomb troops on the Kittilä-Muonio road. The weather was good and bombing occurred out of the reach of light flak, and troop columns were sent into disarray.

On 22 October, three Junkers of PLeLv 44, led by Capt Saarinen, bombed a column of trucks on the road at Jerisjärvi between Kittilä and Muonio. PLeLv 46 sent 1Lt Sonni to lead a three-plane DB detachment to bomb German troops on the Sirkka-Palojoki road. German flak claimed one DB above the target. Capt Siirilä flew with five PLeLv 48 Blenheims to attack troops on the Muonio-Sirkka road.

PLeLv 46 moved from Luonetjärvi to Kemi on October 23, and the squadron was subordinated to Pommituslentolaivue 44 for operations and maintenance. PLeLv 46 sent one Dornier and three DB planes to bomb a vehicle column south of Kilpisjärvi.

At Kemi, HLeLv 26 was reinforced on 24 October by Capt Oiva Tylli and his seven Myrskys of TLeLv 12. Two HLeLv 26 Brewsters were reconnoitering the Muonio-Kaaresuvanto-Enontekiö-Kittilä area when at Jerisjärvi the low-flying planes noticed a German column. As they attacked the troops, one of the Brewsters was hit by the intense flak. The pilot bailed out of his burning mount and took to his parachute.

One plane of PLeLv 44 reconnoitered the Ivalo-Kaamanen area. At Kaamanen airfield some large planes were seen. Another plane of the squadron took off to check out the road between Muonio and Kilpisjärvi.

Partial demobilization of flight personnel began on 25 October and this caused serious problems to the operational capabilities of the Air Force.

HLeLv 34's single war mission in the Lapland War took place on 26 October, when Maj Eino Luukkanen took off with MT-445 on an interception. The squadron transfer did not happen because billeting and maintenance at the intended bases would have been exceedingly hard to manage. In addition, the

front lines moved so far to the north that the Messerschmitts' range would not have reached there.

Also on the 26th, one PLeLv 44 JK plane reconnoitered the Muonio-Kilpisjärvi road and four planes led by Capt Saarinen dive-bombed a German column at Naimakkajärvi on the same road. PLeLv 46 sent Capt Lehto in a Dornier and three DBs to bomb a German vehicle column south of Kilpisjärvi.

PLeLv 42 moved to Pudasjärvi on 27 October. PLeLv 46's Capt Pesola with his Dornier and three DBs bombed a German vehicle column south of Kilpisjärvi.

By 28 October, the aircraft complement of Lentorykmentti 2 had fallen from 29 to 25 operational planes. TLeLv 14 was based both at Pudasjärvi and Paltamo, and HLeLv 26 was based in Kemi.

The initial strength of Lentorykmentti 4, 41 bombers, had fallen to 23 operational planes. PLeLv 42 was at Pudasjärvi, PLeLv 44 and PLeLv 46 (subordinated to it) were at Kemi, and PLeLv 48 flew from Vaala. By now the Germans had retreated to the Muonio-Ivalo level. PLeLv 6 also had seven usable planes at Vaasa and four SBs at Pori, intended for the submarine hunt.

The III Army Corps took Muonio, which had been razed, on 30 October. Reconnaissance flights were made dangerous by very bad weather. Cloud base was often at only 2-300 m and the tops of the hills were almost always inside the clouds.

The region of Ivalo was detached from the operational area of Flight Group Sarko, as the new separation line of Finnish and Russian air forces was drawn at the Saariselkä-Ivalo-Karesjoki line.

The Myrsky fighters subordinated to HLeLv 26 flew their first combat mission on 2 November, when 1Lt Tuulensuu took his pair to reconnoiter the Palojoensuu-Enontekiö direction.

TLeLv 14 moved to Kemi with 12 planes on 7 November, but it did not fly any more missions. The amphibious planes of Detachment Jauri were moved from Pyykösjärvi to Tampere for the winter. Low clouds and rain squalls prevented all flights in the north for the next five days.

Flight activity was resumed on 13 November. One PLeLv 44 Junkers was sent to reconnoiter the German traffic between Palojoensuu and Kilpisjärvi as well as fortification works at Lätäseno and Vuontisjärvi. In addition, food containers were dropped north of Enontekiö. PLeLv 46 sent a DF to reconnoiter Kautokeino and it bombed a column of troops at Kaaresuvanto.

On 16 November, PLeLv 42 sent Capt Huhtala and his nine Blenheims to bomb German troops en route from Palojoensuu towards Kilpisjärvi. PLeLv 44 had one JK flying through intense flak while on reconnaissance to Naimakkajärvi on the Kilpisjärvi road. The plane was hit by many splinters. On the same day three JKs bombed a German storage area at Suikero and one plane attacked a vehicle convoy north of Naimakkajärvi. Two PLeLv 46 Dorniers bombed cars on a road south of Kilpisjärvi.

On 17 November, the entire LeR 4 attacked German troops as well as camp and storage areas in the region between Kaaresuvanto and Suikero. Maj Kepsu bombed troops retreating towards Kilpisjärvi on the riverside road with seven PLeLv 42 Blenheims. PLeLv 44 sent two JKs led by Capt T. Iisalo to attack a vehicle column and barracks at Kilpisjärvi, and two more planes bombed a storage depot at Vuontisjärvi. Two Dorniers of PLeLv 46 and one DB were led by Capt Turpeinen to attack a German storage area at Suikero. Capt Siirilä bombed

a camp area at Suonttavaara with five PLeLv 48 Blenheims.

On 18 November, the German flak claimed one HLeLv 26 Brewster out of five led by 1Lt Teromaa as he reconnoitered the Enontekiö area. This was the last plane lost in the War of Lapland.

One Dornier and one DB of PLeLv 46 attacked German artillery positions at Palojoensuu. PLeLv 48 flew its last war mission when Capt Ranta and his four Blenheims bombed artillery positions at Palojoensuu with hits in the target area.

By 20 November, the demobilization of reservists was for the most part completed as demanded by the peace accord. A chronic personnel shortage hit the Northern Finland air force as everything had to be done by regular staff and conscripts alone.

PLeLv 42 moved to Kemi on 21 November and PLeLv 46 was inserted into Pommituslentolaivue 44. LtCol Birger Gabrielsson was assigned commander of Flight Detachment Sarko on the next day, and the name of the unit was changed to Flying Group.

The last war mission of the Myrsky fighters of HLeLv 26 in Lapland was undertaken on 23 November by Capt Tylli who reconnoitered the Palojoensuu area. The five Ghost Moranes of HLeLv 28 were flown to Tampere.

Two Dorniers, one DB and one DF of PLeLv 44 bombed storage and camp areas on the slopes of Suikero. Maj Kepsu took four Blenheims of PLeLv 42 barracks at Suikero as well. Low hanging clouds, drizzle, and snowfall kept planes grounded for three days.

TLeLv 14 and HLeLv 28 moved away from the war zone to Rissala on 27 November.

A day later, PLeLv 42's commander Maj Kepsu bombed barracks at Kuusivaara with six Blenheims. PLeLv 44 reconnoitered as far as Norway. One JK checked out German road traffic between Kilpisjärvi and Skibotn as well as sea traffic in the fjord of Storfjorden outside of Skibotn. A German Messerschmitt attacked the JK and followed it for 30 minutes firing several times. The JK escaped into ground fog. After this episode clouds, drizzle and snowfall ended flights for five days.

The operation of the Flying Group was terminated on 3 December and LeR 4, based at Kemi, was assigned the unit performing military flight tasks in Northern Finland.

LeR 4 was to have only PLeLv 41 (whose name was changed) with 15 Blenheims, and PLeLv 43, which had six Junkers, two Dorniers, two DBs, and two DFs. The Brewster flight of HLeLv 26 and the MY flight of TLeLv 12 were designated Detachment Metsola and subordinated to LeR 4. The size of Detachment Metsola had been worn down to just five serviceable Brewsters and six Myrskys.

On December 4, the Air Force was returned to its peacetime strength. The following squadrons were renumbered, and the rest were disbanded:

TLeLv 12	HLeLv 11	(LeR 1)
TLeLv 16	HLeLv 13	(LeR 1)
HLeLv 28	HLeLv 21	(LeR 2)
HLeLv 26	HLeLv 23	(LeR 2)
HLeLv 24	HLeLv 31	(LeR 3)
HLeLv 34	HLeLv 34	(LeR 3)
PLeLv 42	PLeLv 41	(LeR 4)
PLeLv 44	PLeLv 43	(LeR 4)

PLeLv 6

PLeLv 45

(LeR 4)

Low clouds and snowfall prevented nearly all flights for a couple of weeks. Just one replenishment mission was flown in the north, and some submarine hunts were flown in the southern sea areas.

One Junkers of PLeLv 43 reconnoitered from Kilpisjärvi to Skibotn on 16 December and it went on to check out the German sea and road traffic north, flying along the Lyngen Fjord to Nordreisa and from there on back via Alta along the road to Kautokeino. The flight took almost five hours.

Low clouds and snowfall prevented all flights for a week. On 18 December, Maj Oskari Tuomisalo arrived to take charge of fighters subordinated to Lentorykmentti 4, and the unit thus formed was named Detachment 12.

On 21 December four pilots were awarded the Mannerheim Cross. They were MSgt Nils Katajainen of HLeLv 24, Capt Olli Puhakka of HLeLv 34, Capt Tauno Iisalo of PLeLv 44, and 1Lt Lauri Äijö an observer of the same squadron. They were the last knights of the Air Force.

On 23 December, PLeLv 43 reconnoitered with one Junkers the direction of Kilpisjärvi and bombed a barrack in Palkkisvaara. One DB of the squadron bombed a camp area in the Sarvisuo region.

The next time the weather allowed any flights in the north was on 26 December. PLeLv 41 took three BL planes to attack a column on the eastern shore of Ropijärvi and one plane bombed a camp area at Vuoskuvaara. Two Dorniers and two DBs of PLeLv 43 bombed camp areas at Ropijärvi and Sarvisjärvi. Four PLeLv 41 Blenheims bombed storage areas along the Kilpisjärvi road on December 30. PLeLv 43 sent two Dorniers and one DB bombed German barracks north of Kelottijärvi.

1945

The III Army Corps, which had been reduced to just one division on 5 December 1944, reached the Kilpisjärvi fells on 12 January 1945. This was to be the final war zone until 27 April, when the last Germans retreated over the border and went to Norway.

At the beginning of 1945 the regular PLeLv 45 submarine hunt flights went on in the western Gulf of Finland, the northern Baltic Sea, and on to the Bothnic Sea, but not one German sub was seen.

On 1 January 1945, PLeLv 41 sent three Blenheims to bomb a group of barracks in the Siikavuopio area in north-western Lapland. One day later, PLeLv 41 flew its last mission of the war as it bombed a group of barracks with two Blenheims at Ropijärvi along the Kilpisjärvi road. One Dornier of PLeLv 43 bombed a German storage depot north of Naimakkajärvi along the Kilpisjärvi road. Another plane went on reconnaissance and strafed a horse column at Vuontisjärvi on the Lätäseno road.

Due to low clouds and snowfall, it was only on 12 January that the flights could resume; one PLeLv 43 reconnoitered the road between Kilpisjärvi and Skibotn.

On 15 January, three PLeLv 43 Junkers went to dive-bomb German barracks south of Kilpisjärvi. There was another reconnaissance flight to Skibotn just before it once more began to snow.

On 20 January, the order was given to all units except

the one fighting the war in Northern Finland to their peacetime bases. It remained the task of Pommituslentolaivue 43 to fly any eventual war missions from its base at Kemi. The direction was north all the way to Norway.

Detachment 12 was disbanded on 23 January 1945. The five remaining Brewsters were flown to Tampere for storage and four Myrsky fighters were flown to Pori to join LeR 1. Lentorykmentti 2 and Detachment 12 had flown 171 sorties, during which German flak had shot down four Brewsters and one Fokker C.X. The Brewsters of HLeLv 26 had been awarded two aerial victories.

On 24 January, the nine Blenheims of PLeLv 41 flew to their peacetime base at Luonetjärvi.

On 24 January, one PLeLv 43 Junker was flying above Skibotn when it noticed two large vessels and four ships sailing in the Lyngen Fjord. Alta had been burned down and the airport there blown up. West of Alta a column of 60 trucks was seen.

Snowfall started at the end of January and it only ended almost a month later. Only at the end of February it was possible for solitary JKs of PLeLv 43 to reconnoiter Skibotn.

On 15 and 16 February, the Allied Supervision Commission gave permission to transfer planes to their peacetime bases or to flight depots. 17 Myrskys were flown to Pori, 13 Messerschmitts went to Rissala and ten to Tampere. The next batches were allowed to be moved on 24 and 25 February, when 39 planes were flown to Tampere.

On 15 March three Junkers of PLeLv 43 bombed a German barracks area north of Kilpisjärvi. Two of these went on to reconnoiter Skibotn, and then one carried on to Balsfjorden. An oil leak forced one plane to turn back and it performed an emergency landing in Kiruna, Sweden. It was damaged and the plane along with its crew was interned for some time. PLeLv 43 too sent two Dorniers and one DB to bomb German barracks north of Kilpisjärvi.

On 18 March, two Dorniers of PLeLv 43 bombed barracks at Kilpisjärvi. Two PLeLv 43 Junkers went out on a bombing run to Kilpisjärvi. One of these got lost in bad weather and returned. The other bombed barracks on the Saana fell and then reconnoitered Skibotn and on the return trip flew up the Lyngen fjord to Nordreisa in the north.

On 22 March, the last combat mission of PLeLv 43s DB planes took place. This was a mission to bomb German barracks with one Dornier and one DB. Two Junkers planes of PLeLv 43 also bombed German barracks north of Kilpisjärvi. One of these planes carried out a reconnaissance of Skibotn and Nordreisa, where five vessels were seen. The road to Alta was seen not to have been cleared of snow.

The last war mission of PLeLv 45's SB planes occurred on 22 March when one plane searched for submarines on the Turku-Hanko-Utö-Bengtškär-Turku route but did not find anything out of the ordinary. The PLeLv 6 and PLeLv 45 SB and BL planes flew 88 submarine search flights during the Lapland war, none of which produced results. Not a single plane was lost.

On 1 April, a retroactive presidential order was given in which it was decreed that the new national insignia was to be a blue-white roundel. It was back-dated to 15 March 1945. The Russians of the Allied Control Commission had initiated this insignia project on 21 February.

On 4 April 1945 at 12.25, JK-268 left for the last mission of the type in this war and flew out to the Arctic Sea fjords. From Kilpisjärvi it flew straight over the fells to Nordreisa and turned to the Lyngen Fjord. Outside Nordreisa, seven ships were seen, and on the Lyngen fjord and harbors a total of four vessels. The plane flew to Balsfjorden before returning to Kemi at 16:00.

Ten minutes after the Junkers, DN-55 took off on a photo mission to Kilpisjärvi. The Dornier returned to Kemi at 16:00. This was the last war mission of the Finnish Air Force.

The Lapland War lasted for 183 days, on which only 43 the weather was suitable for flying. Lentorykmentti 4 took off on 516 sorties, of which 111 had to be aborted due to weather. Six bombers were lost, and nine aircrew members were killed and two more taken prisoner of war.

Kari Stenman, Finland.



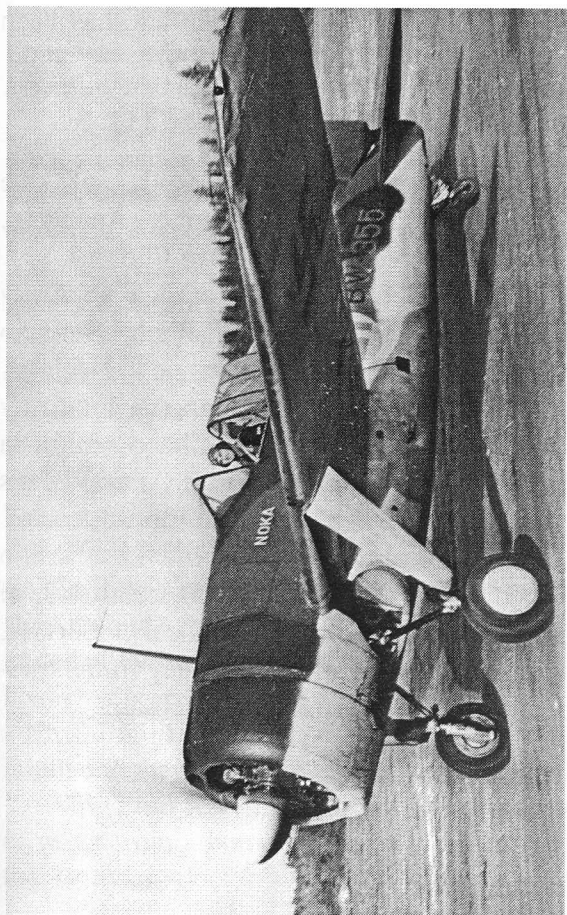
The MY-22 (TLeLv 12) is warmed by the morning sun at the end of October 1944 at Kemi. The Myrsky made 20 sorties into Lapland, seven of which were aborted because of bad weather.

Captions for photos on page 27

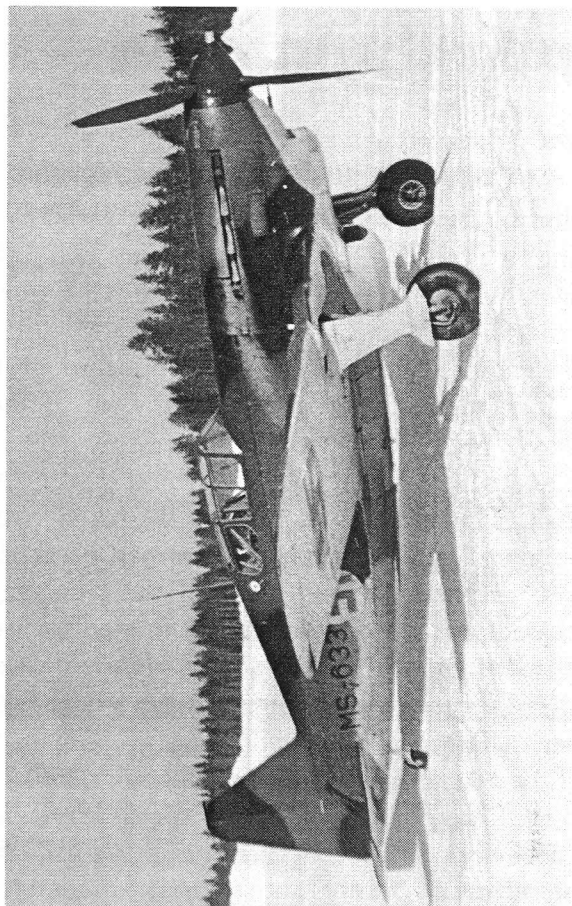
All photos via the author

1. Lieut. Reino Sartjärvi. takes off from Ontola at the controls of the BW-335 (HLeLv 26) on October 2, 1944. The inscription NOKA remained on the nose of the plane until its destruction by the DCA 22 days later.
2. Mörkö-Morane MSv-633 (HLeLv 21) arrives at Rissala on March 17, 1945. Two weeks later, the national emblem was changed to a roundel. TLeLv 14 became HLeLv 21 after the reorganization of December 4, 1944.
3. Do 17 Z, DN-55 of PLeLv43 being refueled at Kiruna, in Sweden, on March 7, 1945, after a forced landing due to a lack of fuel.
4. Junkers Ju 88 A-4 serialled JK-266 of PLeLv 44 bombed up at Kemi in early December 1944. The bomber was assigned to Capt Jouko Saarinen and it was bound to bomb targets in Kilpisjärvi direction (where the borders of Norway, Sweden and Finland meet)."

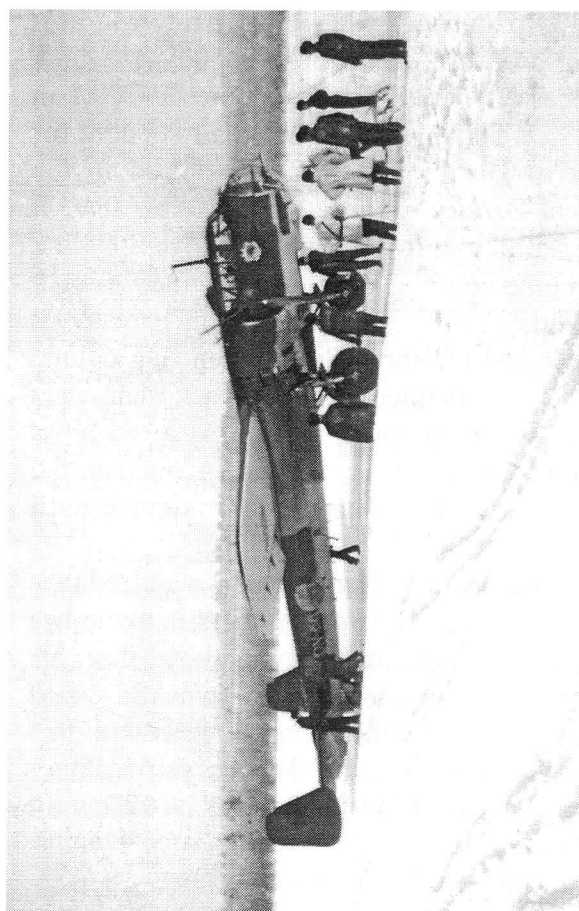




1.



2.



3.



4.

Paraguayan Army Air Ambulances

Antonio Luis Sapienza

On May 26, 1950 the Paraguayan Armed Forces General Command acquired two Beechcraft B35 Bonanza, which received the civil registrations ZP-TAL (c/n D-2391) and ZP-TAM (c/n D-2392).

Right after that, one of the *Bonanzas* (ZP-TAM) was transferred to the the Paraguayan Army Medical Service (Servicio de Sanidad Militar de las Fuerzas Armadas de la Nación) to be used as an air ambulance. It received the serial A-1 (Ambulance 1). This Beech had an overall bare metal color scheme with a black tiny cheatline along the fuselage. The engine cowling was painted in matt black as well as the serial A-1 on both sides of the fuselage. A red cross inside a white circle was also painted on both sides of the fuselage and in the four positions on the wings. Both rudders in the V-tail were painted in the Paraguayan flag colors, red, white and blue, with a yellow star on the white stripe. This Bonanza was in active duty in the Army Medical Service up until the mid-sixties.

The second plane acquired by the Army Medical Service was a Cessna 180A (c/n 50094) which originally received the civil registration ZP-TBM in November 1957. This plane was originally bought for the Ministry of Health, but then transferred to the Army Medical Service. A few months after that, it received the serial A-2. It was painted in overall white except the engine cowling which was painted in matt black. The vertical stabilizer was kept in bare metal and the rudder had the three Paraguayan flag colors. The serial A-2 was painted in large black characters on both sides of the fuselage, as well as a red cross inside a circle. The red cross was also painted in the four wing positions. This plane was in service until the late 1960s.

The third and the last air ambulance acquired was a Cessna 185 in 1962. The identity of this plane has been controversial. Some historians believe that this Cessna was a MAP-donated U-17A (c/n 185-0935) which was fit with a stretcher. The problem with this plane is that it belonged to the Paraguayan Military Aviation with the serial T-07 (donated in 1965, not

1962) and in the mid-70s it received the serial T-17, according to the FAP files. There are two other candidates, which were delivered to the Air Force in 1962, c/n 185-0378 and 185-0379. These two aircraft were not acquired through the MAP but through the Cessna local dealer, Aerocentro S.A. One of them could have been transferred to the Army Medical Service as its third air ambulance, which received the serial A-3. This plane was painted in overall white with the top of the engine cowling in matt black. The serial was painted on both sides of the fuselage in black characters and the Paraguayan flag colors were painted in the rudder. In one of the pictures we can see that red crosses were painted in the wings but in the other, a Paraguayan roundel can be seen in the wings. It was in active service until the mid-1970s.

All the Paraguayan Army Medical Service air ambulances were crewed by the Paraguayan Military Aviation officers.

Since then, the Paraguayan Army Medical Service has not had any other plane of its own and has been using FAP planes and helicopters.

Captions for photos on page 2

1. Beech B35 Bonanza, serial A-1, of the Paraguayan Army Medical Service. Asunción, 1955. Photo: Antonio Luis Sapienza File.
2. Cessna 180, serial A-2, of the Paraguayan Army Medical Service. Asunción, 1957. Photo: Servicio de Sanidad de las Fuerzas Armadas de la Nación.
3. Cessna 185, serial A-3, of the Paraguayan Army Medical Service, flying over the Chaco región in Paraguay in the mid-1960s. Photo: Antonio Luis Sapienza File.
4. Paraguayan Military Aviation 1st Lt. Basilio Yebrán posing next to Cessna 185, serial A-3, of the Paraguayan Army Medical Service, somewhere in the interior of Paraguay in the mid-1960s.. Photo: Col. (Ret.) Basilio Yebrán.

A Fokker Representative in Bolivia

Frits Gerdessen

Emil Meinecke was born in Mannheim, Baden, Germany, on 20 July 1892 and died in St. Catherines, Canada, on 2 May 1975. Emil became a fighter pilot in WW.1 and was posted to the Turkish AF in the Levant, becoming an ace with 5 kills. After the war, he returned to Germany and then came to Holland as a barnstorming pilot, and remained there. He married one of his passengers, a nurse. He also flew demonstration flights in the Netherlands East Indies before working for Fokker first as a mechanic and later as a delivery and test pilot. He test flew nearly every Fokker aircraft up to 1939. During WW.2 he worked with Fokker as a factory pilot and later with Avia.

After WW.2 Emil, with his son Hans, had various jobs, and they worked for some time at Frankfurt for the Berlin airlift. Later the family moved to Canada.

Bolivia was one of the first customers for the Fokker C.5, in this case powered by the 450 hp Hispano Suiza engine. These aircraft were built in 1925 and at least one was test-flown and visited Soesterberg airfield. By late 1927, however, the Bolivian C.5's were not yet in use and something had to be done. Therefore, in 1928 Emil was given orders to go Bolivia to supervise the assembly and test flying of these C.5's.

On 12 January 1928, the Fokker factory wrote instructions for Meinecke: He was to go to Paris to meet with Major Guzman, a Bolivian representative, for information about his stay in Bolivia. While in Paris he was to visit the Hispano Suiza factory to obtain technical information on the engines. He was also to receive 5 sets of fuel-injection nozzles for the carburettors of the Hispano Suiza engines. Because of the thin air in Bolivia, the HS people had to work out the proper settings for these. As the HS had 6 carburettors, tuning the engine was no simple job. The Fokker factory had also engaged a Swiss foreman who was to arrive in Bolivia before Emil.

Emil was in La Rochelle on 4 February to board a ship bound for Callao, Peru. From Callao, Emil travelled by boat to Mollendo, from where he wired the Fokker representative in La Paz, Herr W. Bandt, of his arrival. Emil took the train to La Paz where he met Herr Bandt and they visited War Minister Guzman.

Now Emil fell ill with typhus - he had taken a drink of water from a bottle in his train cabin. He didn't trust the Bolivian doctor and his medicine was delivered

wrapped in filthy paper. Therefore, he contacted his Swiss colleague who supplied boiled castor oil and opiates. Emil knew this remedy from his time in Turkey. After a few weeks he had recovered, but still had to adapt to the thin air. While living in La Paz, Meinecke lived in the Hotel Hamburgo.

Once he felt sufficiently recovered, he went to the airfield. One C.5 had been assembled, but the motor was not working. Since there was no trouble with the Breguet 19's that had been delivered to Bolivia with the same HS engines, Emil asked the French, who had managed to tune their engines for the high altitude, for help. The French Breguet pilot, who had already made himself a hero by performing aerobatics over La Paz, looked down on Meinecke and the Fokkers, and it was soon clear that no help could be expected from the Breguet people.

Meinecke soon adapted to Latin American habits. He bribed a mechanic to take a carburettor from a damaged Breguet. After he had measured the fuel-injection nozzles, the "loaned" carburettor was replaced. The Swiss foreman knew a workshop in La Paz that could modify the nozzles, which was done in one day. Now the Emil's Hispanos ran smoothly.

Once all C.5's had been assembled, Meinecke and the foreman test flew one and then did aerobatics over La Paz to show that Fokker aircraft could do any thing the Breguets could do.

Herr Bandt was never seen on the airfield, but occasionally he sent an assistant. Emil made a test flight with the assistant's lady secretary as passenger, but while landing he hit a frozen mole hill, breaking the undercarriage, propeller, and some teeth as he hit the cockpit rim. A few days later, when the French "colleague" showed the damaged Fokker to the Bolivian president, Emil stopped all cooperation with the Breguet people.

Emil wired the Fokker factory to ship stronger undercarriages. While waiting for these parts, he had his teeth repaired. Fokker wrote on 21 May that they needed documents for insurance purposes and that they hoped that the treatment was completed and that Meinecke had no more pain.

On 16 June, the Fokker factory sent a telegram to Herr Bandt: *"A fuselage center section would be sent without costs on condition that a debt of f 2640 from 1926 was paid as well as 3 months (April-June) salary*

for Meinecke: £ 246." Fokker received no reply and then wired the Bolivian War Ministry on 4 July: "*On advice of Meinecke we consider it best to supply a new center section free of charge, under condition that the debt of f 2640 from 1926 is paid as well as 4 months (April-July) salary for Meinecke: £ 328, and the prolongation of Meinecke's flying insurance: £ 42. We expect a decision by telegram at the latest the 10th July.*" Emil was informed that his flying insurance expired on 15 July and if the Bolivian government didn't pay in time, he would be ordered by telegram to fly no more and depart Bolivia by 1 August.

However, the Ministry proved with documents that Herr Bandt had already received the money. Emil went to Herr Bandt, who explained he had used the money to settle some private debts and that was the reason he didn't dare visit the airfield. Emil also learned that there was a new representative, a brother-in-law of Herr Bandt. Apparently Emil had written to the Fokker factory that he had better expectations with the new representative, because from a letter to Emil, dated 4 July, it appears that Fokker didn't know about the new representative.

Once the new undercarriage had been fitted, one C.5 was prepared to accompany a Breguet, flown by the French pilot, to fly a Bolivian general to the Chaco for a four-week inspection tour. Emil trained a Bolivian pilot who mastered the C.5 within a few flights.

Now Emil asked Air Force commander, Vargas Bozo, for permission to train six pilots on the C.5. These were the same pilots who had been rejected as pupils by the French pilot. Within 10 days, all six were checked out on the C.5. When the two aircraft from the Chaco returned, they were met by three C.5's. After everyone had landed, the French pilot was quite surprised to see the pilots he had rejected climbing out of the three C.5's.

Emil also made a demonstration flight for the Bolivian president, during which he was in great pain as

he had tripped on the street and broken two ribs. He was offered a job in Bolivia, but he rejected it.

Then the Fokker representative invited Emil and Bolivian officers and pilots for a dinner. At the end of the diner he found he had left his wallet in another suit and he asked Emil to pay. He promised to pay Emil back the next morning when Emil was to leave by train. The next morning, he didn't turn up, and since there was only one train a week to Mollendo, Emil had to depart.

It is not clear when Meinecke left Bolivia, but it was possibly after 16 August, as on that day the Bolivian Chief of Staff issued a certificate in both Spanish and German complimenting Meinecke for the excellent work he did during his five-month stay in Bolivia.

He travelled by ship to Marseille and by train to Paris, where he got a lift on a KLM airliner.

On 11 October 1935, Fokker offered the Bolivian AF six C.12 advanced trainers with Wright Whirlwind radial engines for \$ 16.750 at the factory. The costs of packing, transport, and insurance were not mentioned. As usual the customer had to supply engines and certain other equipment. The C.12 was a two-seat biplane with the wings of the C.10. It was never built.

[Author's note: The draft of this story was written by Frits Ruth based on information from Emil Meinecke and documents in the Fokker archive. Frits Ruth. was born in Amsterdam 5 Sept. 1918. He served as a conscript with the LuA (AA artillery) in 1939/40, and volunteered for the M-vlieger training. The M-pilot training was a scheme in which pilots received primary training at civil flying schools. They would then be posted to an advanced training school. Ruth received FAI 984 on October 30 1940. Ruth was a neighbor to Emil Meinecke in Haarlem, and was a friend of Emil's son Hans. As long as we had contact, Ruth lived on the island Amrum, on the German North Sea coast.]

Frits Gerdessen (SAFCH #12), The Netherlands.

See photos on page 35

-miscellaneous-miscellaneous-miscellaneous-miscellaneous-miscellaneous-

"I just found a great new website. It is in Spanish, but the photos are great. Lots of modern day, Spanish civil war, and WWII - in color, too. From the captions you can get the data on the photo. The website is: <http://elhangardetj.blogspot.com>."

Terry Love (SAFO #229), USA.

"While reorganizing the SAFCH files, I discovered a set of duplicate posters featuring color profile drawings of post-WW2 Italian AF aircraft. There are a few duplications

between these large posters (19 inch by 27 inch), but they each have 49 profiles of aircraft from the NA T-6 to the Douglas DC-8. The color rendition is superb, and best of all, they are all drawn to the same scale.

"These two posters are available from the editorial office for the cost of postage."

For Sale: **Yak-3**, rare 1/72-scale metal-cast kit from Russia ca. 1970. Pre-painted. Some assembly required. Excellent condition except two of the propeller blades are broken

from the hub. \$10 plus postage. Contact the editorial office (safch@redshift.com) for postage costs.

"I have put all my color illustrations on my website. They are now available as prints (6 sizes available on paper, canvas, etc.) via the Website Manager, Artspan, at <http://www.hubertcance.com>".

Hubert Cance (SAFCH #809), France.

The Fokker C-V in Bolivia

Dan Hagedorn & Antonio Sapienza

[Ed: The following is a reprint of a chapter from, **Aircraft of the Chaco War 1928-1935**, by Dan Hagedorn & Antonio L. Sapienza. ISBN 0-7643-0146-2. Available from amazon.com for \$33.14. This book is highly recommended to all aviation enthusiasts. Reprinted with the permission of the authors.]

Most reports and histories of aviation in Bolivia invariably quote the angular Fokker C-Vs acquired by Bolivia as C-Vc variants. However, recently it has been learned that the six (some sources say five) aircraft in question were, without doubt, actually C-Vb variants, and had manufacturers serial numbers 4874 to 4878, one of these numbers apparently used twice to produce the sixth aircraft, a not unknown Fokker practice at the time.

These aircraft, ordered 12 January 1925, were the first "standard" combat aircraft type acquired by Bolivia, and were purchased at the suggestion of Cpt. Raúl Vargas Guzmán, Technical Director of the Escuela Militar de Aviación, who apparently traveled to Holland to oversee the construction and delivery of the aircraft.

Both German and U.S. Diplomatic reports (dated 24 January 1927 and 12 December 1927, respectively) confirm that six Fokker C-Vs were, by those dates, actually on hand in Bolivia although an earlier U.S. report, dated 11 September 1926, only cited five. These aircraft had 520hp Hispano-Suiza engines, as did some of the Breguet 19s acquired by Bolivia, in an admirable attempt to standardize on one high-performance engine type.

The Fokker C-Vs have really never received proper credit for the contributions they made to the training of cadre during the years immediately prior to the onset of open hostilities with Paraguay. A number of long-distance, "good-will" flights were made with the aircraft to neighboring nations, and proved useful in building confidence amongst Bolivia's aircrews in their ability to navigate over unfamiliar terrain. One of the first of these was a much herald flight commencing on 6 October 1928 to Argentina, the aircraft used being named appropriately "Bolivia" at the time and being crewed by Maj. Alfredo Santalla Esprella and Cap. Lucio

Luizai. The trip also included several stops in Uruguay on the return circuit.

Another flight, the next month, was attempted to Rio de Janeiro, Brazil via Santa Cruz, Puerto Suarez, Tres Lagoas, Baurú and Sao Paulo, crewed by Cap. Jorge Jordan Mercado (who became one of the heroes of the Chaco air war) and Sgto. Julio Loayza. Unfortunately, the aircraft (named "Mariscal Sucre") suffered engine failure on the leg between Tres Lagoas and Baunú, Brazil and the flight was terminated and the aircraft lost. However, the crew were still feted as heroes, as this route was considered especially audacious, being over largely uncharted territory.

One of the Fokker C-Vbs accompanied the Breguet 19 "Potosi" on its "reprisal" raid on Paraguayan installations in the Chaco on or around 18 January 1929, although the identity of this aircraft is not known. Crewed by pilot Sub.Tte. Faustino Rico Toro and observer Maj. Alfredo Santalla, this aircraft is noted to have had the uppermost national color on its rudder (red) carried all the way forward to the leading edge of the vertical fin, an unusual practice at the time.

The Bolivian C-Vbs colors are not known with any certainty, although they appear in available photos to have been doped aluminum over all in most cases, aside from standard national markings in four wing positions, either side of the rear fuselage (unlike Breguet 19s) and, on most of the aircraft, the national tricolors on the rudder area only. Three are known to have been named: "Bolivia", "Mariscal Sucre," (believed actually worn as "Meal. Sucre" and "Sgto. Max Paredes," while two others simply had Roman numerals "I" and "II" (although this is sometimes shown in records as "Fokker I" and "Fokker II" it was not presented on the aircraft in this manner).

By the time open hostilities erupted in 1932, only two of the Fokker Vbs remained on strength, and both were at La Paz, where they were largely ignored. The fate of the others in the interim is unknown. However, this wasn't the end of the Bolivian Fokker C-Vb story.

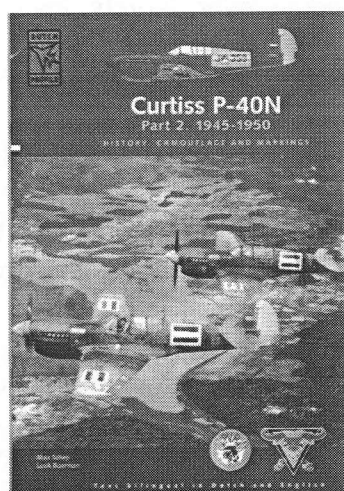
Cliff Travis of the Curtiss-Wright team in La Paz, reported as late as 13 September 1933 that "...the Bolivians have two old Fokker D-7s [sic] here that

have been lying semi-derelict in the hangar for, reportedly, seven years come December more-or-less and they are going to have Don [of the Curtiss-Wright technical team] weld them up and get them on the job again. I have tried to talk them out of it on the grounds that the tubing is bound to be rusty and eaten inside and that they will turn out to be coffins for someone, but they have just received new wings and engines for them....which was some of [Raúl] Vargas Guzmán's doings last year before they got wise to him and kicked him out of the service." Indeed, a U.S. Intelligence Report dated 23 May 1933 had reflected, somewhat inaccurately, that Bolivia had as of that

time "one Fokker 550hp Hispano-Suiza acquired 1929(?)...and three 600hp Hispano-Suiza Fokkers acquired in 1933" which, while somewhat inaccurate in detail, probably accurately reflects that at least four Fokker C-Vb airframes still existed by that date at La Paz.

The subsequent fate of these aircraft is not reflected in any Bolivian history of the war, although JANE'S All the Worlds Aircraft still reflected the type as being in service in Bolivia into its 1939 edition! Intelligence reports on Bolivian air strength, however, do not show any Fokker aircraft later than 1933.

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Curtiss P-40N in service of the Royal Netherlands East Indies Army Air Force: Part 2 1945-1950, by Max Schep and Luuk Boerman. Dutch Profiles. Bilingual text in Dutch and English. Website: www.dutchprofile.nl.

The Dutch received a total 67 P-40Ns from Lend-Lease during WWII. These operated in the Pacific, and by the end of the war, 33 had been lost or written off.

This volume starts with the end of WWII in the Pacific and carries the story of Royal Netherlands East Indies Army Air Force's (RNEIAAF) No.120 Squadron and their P-40Ns through their return to Java, their activities in two "Police Actions" against Indonesian rebels, and their disbandment in 1950. While I don't have **P-40E/N part 1 RNEIAAF**, I assume that the story of the Dutch P-40N during the WWII is covered in this earlier volume.

A bit of statistics: this book consists of 44 A-4 size glossy pages including 71 well-reproduced photos, 3 pages of tables, and 14 of colorful profile drawings.

A couple of excerpts from the book about events during the "First Police Action" in 1947 will give you some idea of the high quality of the translation and the depth of the research:

"On 21 and 22 July the first ops were flown as part of Operation Pelikaan, tasked with destroying the airplanes and bases of then young Republic of Indonesia. No.120 Squadron destroyed three enemy planes at Panasan, six at Magoewo near Djocja and a further seven at Maospati near Madioen."

"A second remarkable incident was the crash of Dakota VT-CLA with the loss of all passengers and crew. The plane had been chartered by an Indonesian millionaire to fly medical supplies to Djocja but was not wearing Red Cross markings. It was intercepted in inclement weather by two P-40N's flown by 1/t B. (Ben) Ruesink and sm. W. (Bill) Erkekens who thought they were dealing with a *Betty* or a *Hellen*. The fighter planes fired warning shots to force the Dakota to land at a Dutch airbase. However, the plane remained on course but descended and hit the treetops, and crashed."

These excerpts also serve to highlight my only major qualm about this book -:the lack of a map to help orient the reader. While I have a good idea where Batavia, Soerabaja, and even Biak

are, most of the other places mentioned are not in my mental GPS system.

The camouflage and marking carried by the RNEIAAF's P-40Ns make for interesting modeling subjects: At first they were in standard USAAF camouflage of olive drab over neutral grey, with a white outlined Dutch flag insignia in four positions (on either side of the fuselage and on the upper port wing surface and lower starboard wing surface. (The aircraft in the cover photo was unique in having the flag on both upper surfaces of the wing.) Serial numbers in the range C3-500 to C3-566 were carried in small script on the engine cowling. At the end of 1947, the flag insignia was replaced by the familiar Dutch trisected roundel in the usual six positions with a small Dutch flag on the vertical stabilizer. The serials were changed to J-3xx by simply lowering the previous serial by 200. These were applied on the fuselage in large black script with the J before the roundel and the number aft of the roundel. At the same time the camouflage paint was removed leaving the aircraft in bare metal. However, many P-40n were left in a mixed scheme consisting of the original camouflage with areas of bare metal. These variations are well illustrated in the photos and color profile drawings.

Curtiss P-40N in service of the Royal Netherlands East Indies Army Air Force: Part 2 1945-1950 is highly recommended to everyone who appreciates a well-research history accompanied by excellent color profile drawings of exotic color schemes for a familiar aircraft type.



Československé Nieuporty, Zdeněk Čejka. Historické Sešity. Zdeněk Čejka, E-mail: zd.cejka@post.cz.

This thin volume covers all Nieuport fighters that were flown by Czechoslovak airmen; those that accompanied the Czech Legion in their odyssey across Siberia (see SAFO #10), those that flew with the French on the Western Front, and the single Nieuport 23 that served in the Czechoslovak Air Force. This latter aircraft, No. 3598, was an Ukrainian machine flown by an Austrian, Rudorfer, to Czechoslovakia to escape the advancing Poles in the Ukraine. It later participated in the fighting in Eastern Slovakia with the Hungarian Soviet Republic, and ended up in a training role until it was scrapped in 1925.

This booklet consists of 16 A-4 size pages of Czech text and 32 photos, plus a 4-page English summary by SAFO member Colin Owers. In addition there are 5 color profile drawings. (1) Nieuport 17 '4214' of the 33rd Corps aviation detachment, a Russian unit incorporated into the Czechoslovak Legions, (2) Nieuport 21 '1359' of the Czechoslovak Legions in Russia, (3) Nieuport 21 '1940' of the Czechoslovak Legions in Russia, (4) Nieuport 23 '3598' of the Czechoslovak Air Force with early Czechoslovak roundels, and (5) '3598' with Czechoslovak flag insignia.

The author provided the following in an e-mail to SAFO: "The aircraft of the Aviation detachment of the Czechoslovak Legions in Russia were left in their original insignia; Russian aircraft carried Russian roundels (and American aircraft (LWF model V) carried the US star with enclosed red circle on a blue roundel. Later, these insignia were replaced by white-red vertical stripes on the rudder (white leading) and a similarly-colored

sunburst (white forward) on the lower surface of the lower wing."

This excellent little book is available from the author at the e-mail address above. The cost is 3.20 Euros plus postage; payment by PayPal or Moneybookers.



Letadla Voisin v Československu, by Zdeněk Čejka. Historické Sešity. Zdeněk Čejka, E-mail: zd.cejka@post.cz.

In 1919, France donated 115 aircraft to the newly independent Czechoslovak Republic; 50 Spad 7 fighters, 50 Salmson 2 observation aircraft, and 15 Voisin 10 night bombers. Only five of the Voisins were erected in Czechoslovakia. Two soon crashed and the remaining three were relegated to training duties until they were withdrawn from service in 1921.

This little booklet consists of 16 A-5 pages with a Czech text and 24 photos, plus 2-page English summary by SAFO member August Blume (deceased). In addition, there are 3 color profile drawings.

This excellent little book is available from the author at the e-mail address above. The cost is 2.25 Euros plus postage; payment by PayPal.



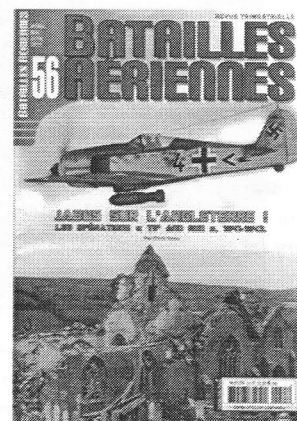
Guerre sur le Désert: La Regia Aeronautica au Combat 1940-1943 (1^e partie), by Giancarlo Garello. Batailles Aériennes #55. Editions Lela Presse, 29 rue Paul Bert, 62 230 Outreau, France. www.avions-bateaux.com. E-mail: contact@avions-bateaux.com.

This latest edition from Lela Presse maintains the now-familiar format of Batailles Aériennes: French text, well-reproduced photos, excellent color illustrations, informative maps, and order-of-battle tables.

This first part covers the first few months of the war in the desert. An idea of the coverage can be gained from the headings of the main chapters: (1) La Regia Aeronautica en Libye à la veille de la guerre, (2) Les premiers mois de la guerre en Libye, (3) La guerre des biplanes: FIAT contre Gloster, (4) Le mauvais employ de l'aviation de bombardement, (5) Les premières actions des torpilleurs, (6) Les opérations aériennes dans la Sahara Libyen, and (7) Les liaisons aériennes.

The statistics of the content are, as usual staggering: 82 A-4 size glossy pages, 119 photos, 2 maps, two color 3-view drawings (Ba 65), and 26 color profiles [Italian: S.81 (4), Ba.65 (1), CR.32 (2), CR.42 (8), S.79 (4), & S.82 (1); RAF: Blenheim (1), Gladiator (4), & Hurricane (1)]. My only disappointment was that, while there are many photos of the Caproni 309 Ghibli, there are no color drawings of this elegant little twin-engine communication aircraft.

Batailles Aériennes #55 is highly recommended to all students of Italian aviation in WWII. It also should be considered by everyone with a little facility with the French language and an appreciation of well-illustrated histories.



Jabos sur l'Angleterre: Les Operations "Tip and Run", 1941-1943B, Chris Goss. Batailles Aériennes #56. Editions Lela Presse, 29 ue Paul Bert, 62 230 Outreau, France. www.avions-bateaux.com. E-mail: contact@avions-bateaux.com.

While not necessarily on a small air forces, all issues of Batailles Aériennes deserve attention because of their meticulous research, excellent photo selection, and beautiful color profiles. Vol. #56 is no exception.

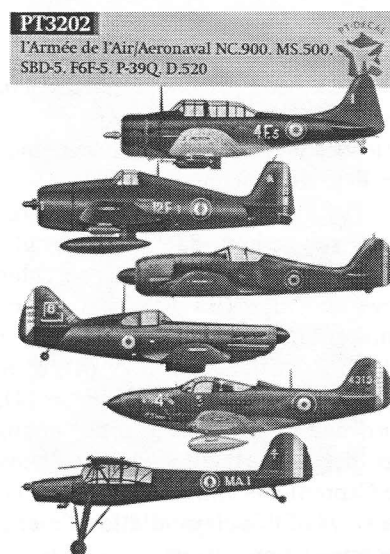
Included within the 82 pages are 128 photos (German and British aircraft and personnel, and damaged English towns), 4 contemporary maps (showing British towns with path of attacking aircraft and positions where bombs struck), and 23 color profile drawings (3 Me 110, 7 Bf 109, 10 Fw 190, & 3 Typhoon).

The chapter headings define the extents of the textural coverage: (1) Les débuts opérationnels, La hantise des pilotes de chasse, Un renouveau inattendu, Une nouvelle monture, Intermède dieppois pour les Jabos, Enfin

un opposant, Nouveaux changements, La fin des attaques. (2) Le Blitz sur Hastings et Bournemouth: les attaques "tip and run". (3) Trois attaques en six jours: des objectifs à l'intérieur du pays, Sur Yeovil, Attaques sur Cornouaille: Bodmin et Constantine.

Batailles Aériennes #56 is highly recommended to all students of aerial warfare and especially to our British friends who may have been of the receiving end of these raids.

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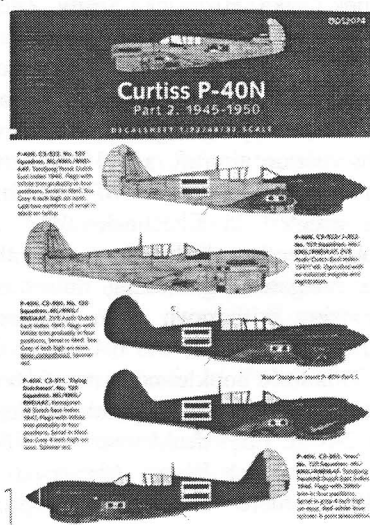


L'Armée de l'Air/Aéronaval, 1/32-scale decals. Dutch Decals PT3202. Website: www.dutchdecal.nl.

This 150 mm by 195 mm sheet contains all the French roundels (both with and without superimposed anchors), serials, and unit emblems, to decorate six 1/32-scale aircraft in Armée de l'Air/Aéronaval colors: NC.900 (French-built Fw 190), MS.500 (French-built Fi 156), SBD-5, F6F-5, P-39Q, & D.520.

The decals, as usual from Dutch Decals, are of excellent quality and the full-color instruction sheet has side-view drawings of all 6 aircraft. Unfortunately, there are no plan views, so the modeler is on his own when placing the decals on the wings.

Recommended to any modeler with room on the shelves for six 1/32-scale a/c.



Netherlands East Indies Air Force Curtiss P-40N. 1/72-, 1/48-, & 1/32-scale decals. Dutch Decals DDS2074. Website: dutchdecal.nl.

This 150 mm by 195 mm sheet complements Dutch Profile Publications' book on the *P-40N in the NEIAF* (reviewed elsewhere in this issue of SAFO). This sheet contains all the roundels, serials, and unit marking to decorate two P-40N in each of the major scales. Included are the Dutch "flag" insignia and "C-" serials used immediately after WW2 and the Dutch trisected roundel and "J-" serial used near the end of the P-40N's service.

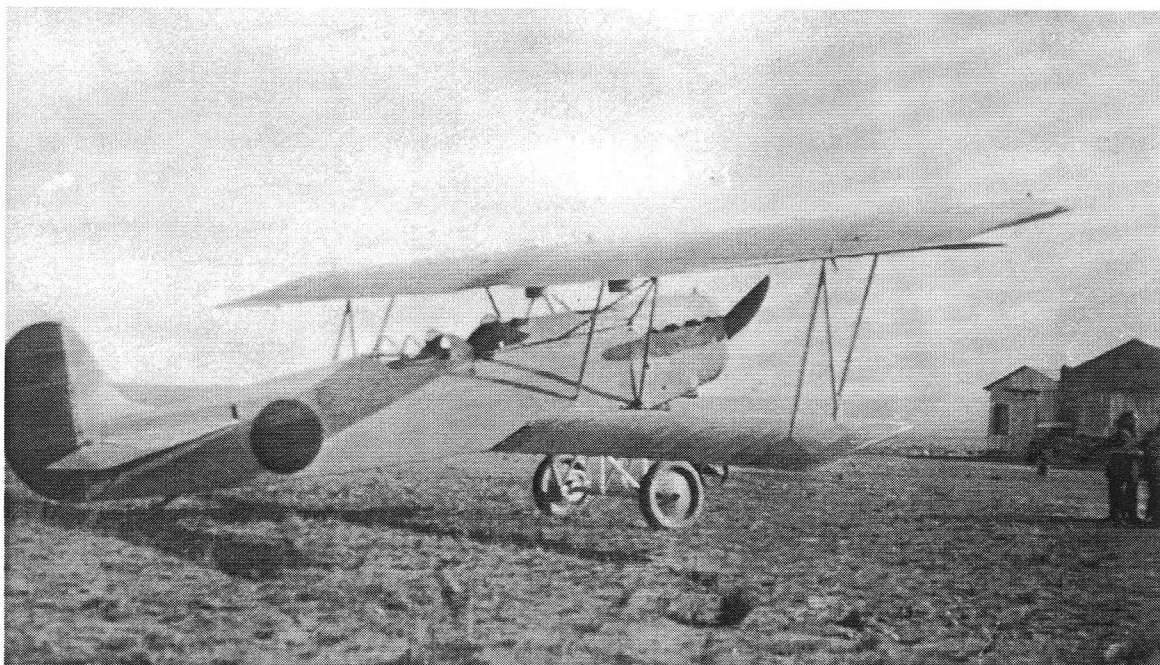
The decals, as usual from Dutch Decals, are of excellent quality and the

instruction sheet has side-view drawings of 16 aircraft; some in an olive-drab over neutral grey camouflage, some in overall aluminum, and some in a mix of both schemes. Plan views are provided to help with the location of the insignia on the wings.

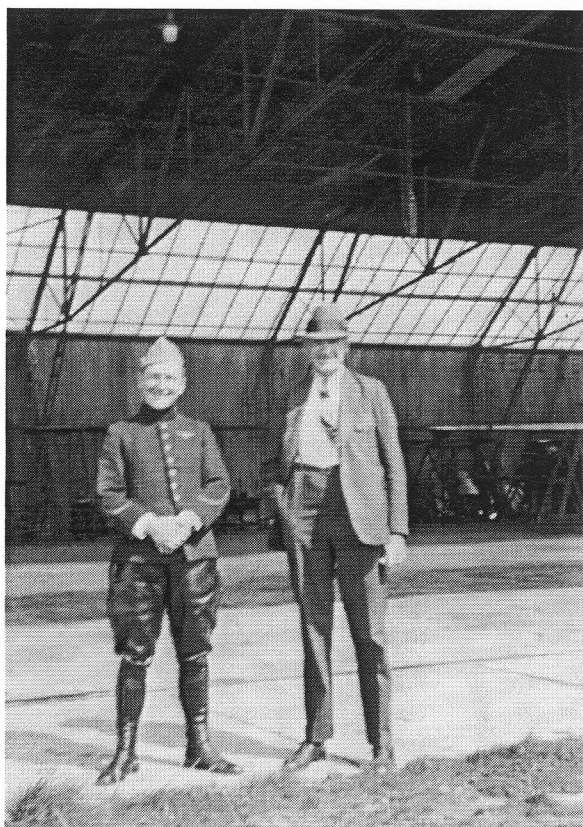
These decals are recommended, and the modeler of 1/72-scale aircraft will be tempted to add two Dutch P-40N to his collection.

[Ed: I have some serious reservations about a decal sheet in 1/72-, 1/48-, and 1/32-scale, even when kits in all three scales are available (Fortunately, the P-40N is available in 1/72 by Hasegawa, in 1/48 by Mauve, & in 1/32 by Hasegawa.) It would take a pretty determine modeler to build the same aircraft in all three scales, particularly when all three are in the marking of the same air force. Otherwise, the modeler who buys the decals will have to have a lot of modeling friends to find ones interested in the decals he does not use.]

Future Releases from Dutch Decals: DD72069: RNethAF Hunter F/Mk.4/6; Thunderstreak, Starfighter, & F-16A/B. DD48043: RNethAF T/F-104G Starfighter and F-16A/B. DDWhisky4: T-33A Demonstration Whisky4 1:72/48 32 scale in one sheet. DD32012: B-25J Mitchell RNEIAAF for Wingscale kit.



Bolivian C.5.(From the album of Emil Meinecke, via Frits Ruth)



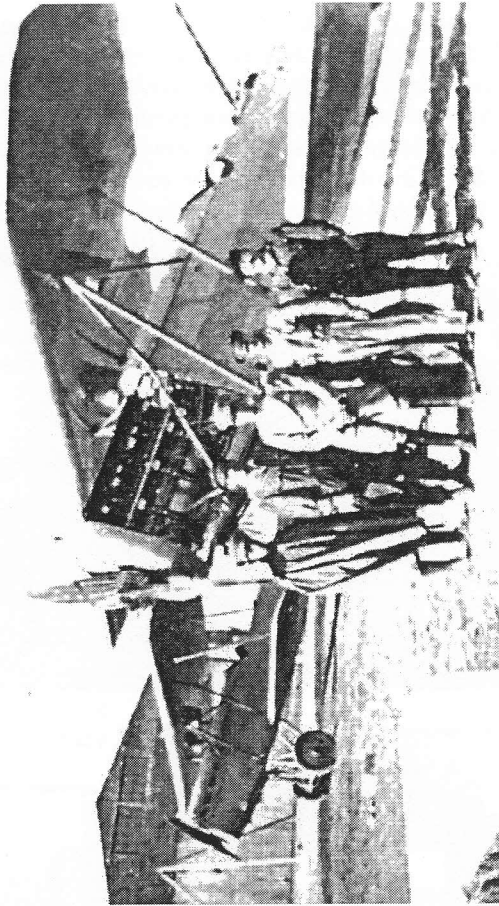
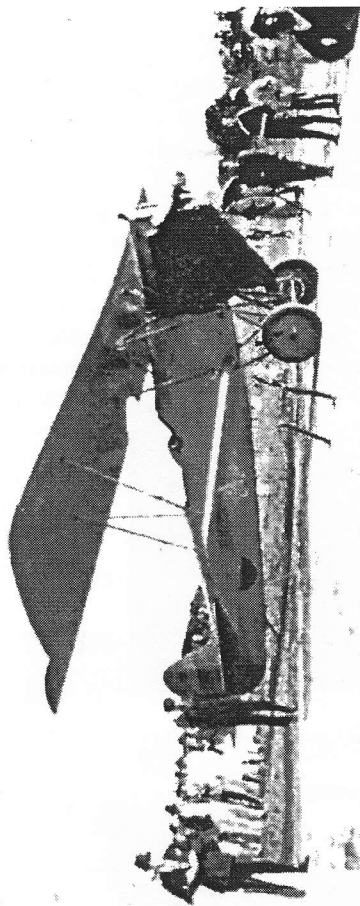
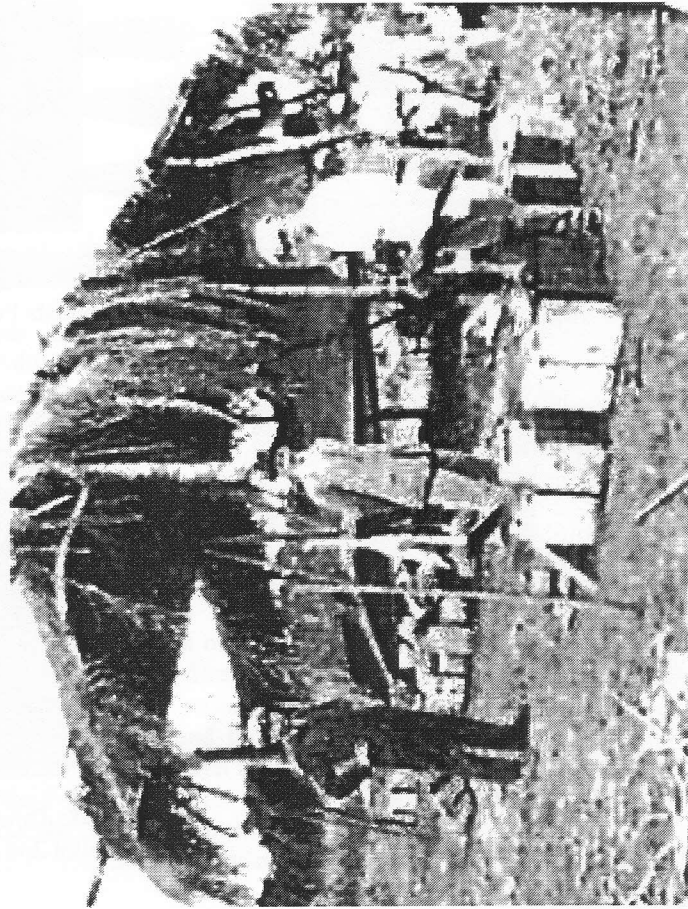
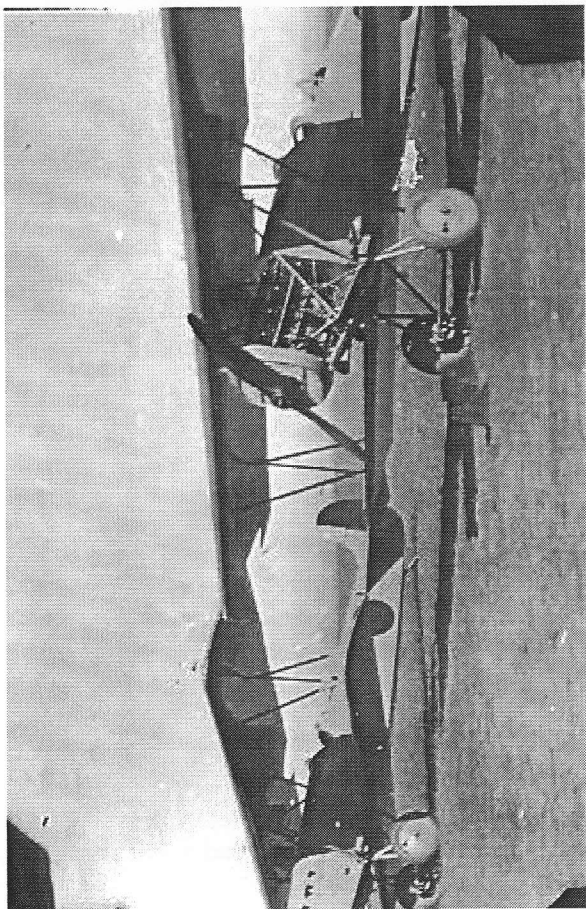
1930: Meinecke is on the right. He is often seen with a hat, otherwise a beret (alpino). The other man is a NCO (chevrons), most likely Scandinavian.



1920: Barnstorming days, with an LVG biplane: LtoR pilot Meinecke, parachutists Fehrenbach, and mechanic Finzel.



1937/38: Three Fokker employees with the G.1 prototype. Left to right: test pilot 2nd Lt. T.H.Leeegstra, Emil Meinecke, and ir. F.P.Stok, chief flying department.



[Editor's note: I asked Dan Hagedorn to comment on Frits' article, and to provide additional photos.]

"I have only four rather weak images of Bolivian C.Vb's (I believe that is the correct presentation of the type) and have attached them. I find that I have to take some exceptions to what Frits reports. First, the five (or six, according to some reports) known aircraft were delivered between August 1924 and (more likely) 12 January 1925 - nearly three years earlier than Frits reports. One had a 550hp Hispano-Suiza engine (also given as 520hp) and at least three were given with 600hp units.

"Could the officer seen in the middle of one of the images by Emil? Notice that the one image shows a C.V under a very Chaco-appearing shelter, rather different from what would be found at El Alto. The image with the five officers in front of an aircraft shows a hangar known to have been at El Alto, however."

Dan Hagedorn (SAFCH #394), USA.